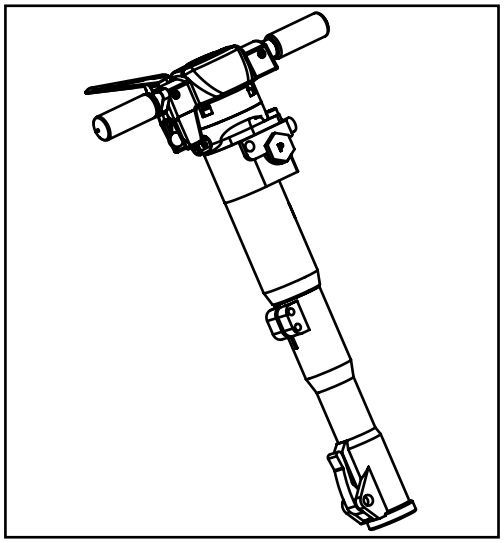
BHB BREAKERS



- Spare Parts Book 18

EC DECLARATION OF CONFORMITY / DECLARATION CE DE CONFORMITE / DECLARACIÓN DE CONFORMIDAD CE / DECLARAÇÃO CE DE CONFORMIDADE / EG-VERKLARING VAN OVEREENSTEMMING / EF OVERENSSTEMMELSESERKLÆRING

GB We, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB,** hereby certify that if the product described within this certificate is bought from an authorised Belle Group dealer within the EEC, it conforms to the following EEC directives: 98/37/EC (This directive is a consolidation of the original machinery directive 89/392/EEC), Electromagnetic Compatibility Directive 89/336/EEC (as amended by 92/31/EEC & 93/68 EEC). The low voltage directive 73/23/EEC, BS EN ISO 12100-1:2003 Safety of machinery and associated harmonised standards, where applicable. Noise emissions conform to directive 2000/14/EC Annex VI, for machines under article 12 the notified body is **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB.**
Noise Technical Files are held at the Belle Group Head Office address which is stated above.

F Nous soussignons, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, certifions que si le produit décrit dans ce certificat est acheté chez un distributeur autorisé Belle Group au sein de la CEE, il est conforme aux normes CEE ci-après: 98/37/CE (Cette norme est une codification des normes de la machine d'origine 89/392/CEE), Norme compatible pour l'électromagnisme 89/336/CEE (modifié par 92/31/CEE et 93/68/CEE). Caractéristiques basse tension 73/23/CEE, BS EN ISO 12100-1:2003, Norme de sécurité des machines et des critères associés et configurés, si applicable. Les émissions de bruit sont conformes à la directive 2000/14/EC Annexe VI pour machines , article 12, l'objet mentionné est **AV Technology Mimited, AVTECH House, Birhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB.**
Les dossiers techniques sur les émissions sonores des machines sont détenus au siège social de BELLE GROUP à l'adresse ci-dessus.

E La Sociedad, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK 17 OEU, GB**, por el presente documento certifica que si el producto descrito en este certificado es comprado a un distribuidor autorizado de Belle Group en la CEE, este es conforme a las siguientes directivas: 98/37/CE de la CEE (Esta directiva consolida la directiva inicial sobre maquinaria 89/392/CEE), Directiva 89/336 CEE sobre Compatibilidad Electromagnética (según enmiendas 92/31/CEE y 93/68 CEE), Directiva sobre Bajo Voltaje 73/23/CEE, BS EN ISO 12100-1:2003 de Seguridad de Maquinaria y Niveles armonizados estándares asociados donde sean aplicables. Emisión de Ruídos conforme a la Directiva 2000/14/CE Anexo VI para máquinas bajo artículo 12 la mencionada unidad está **AV Technology Limited, AVTECH House, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 OXU, GB.**
En La Sede Central de Belle Group existen Archivos Técnicos con contenido referente a Niveles de Ruido.

P O signatário, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK 0EU, GB**, pelo presente, declara que se o produto descrito neste certificado foi adquirido a um distribuidor autorizado do Belle Group em qualquer país da UE, está em conformidade com o estabelecido nas seguintes directivas comunitárias: 98/37/EC (esta directiva é uma consolidação da directiva de maquinaria original 89/392/EEC), Directiva de Compatibilidade Electromagnética 89/336/EEC (conforme corrigido pelas 92/31/EEC & 93/68 EEC). A directiva de baixa voltagem 73/23/EEC, BS EN ISO 12100-1:2003 Segurança da maquinaria e às normas harmonizadas afins se aplicáveis. As emissões de ruído respeitam e estão dentro das directivas para máquinas 2000/14/EC Anexo VI, artigo 12, sendo o organismo notificado **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB.**
A informação técnica sobre níveis sonoros está disponivel na Sede da Belle Group na morada acima mencionada.

NL Ondergetekende, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 OEU, GB,** verklaren hierbij dat als het product zoals beschreven in dit certificaat is gekocht van een erkende Belle Group dealer binnen de EEG, het voldoet aan de volgende EEG richtlijnen: 98/37/EC (Deze richtlijn is een opvolger van de orginele Machinerichtlijn 89/392/EEG), Electromagnetische Compatability Richtlijn 89/336/EEG (geamendeerd door 92/31/EEG & 93/68 EEG). De Laagspannings Richtlijn 72/23/EEG, BS EN ISO 12100-1:2003 Veiligheid van Machines en hieraan gekoppelde geharmoniseerde Standaarden, waar deze van toepassing is. Rumoer emissions passen voor richtlijn EC Zijgebouw VI , voor toestel onder stuk 12 naar de notified troep zit **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 OXU, GB**
Worden de Technische Dossiers van het lawaai gehouden op het adres van het Hoofdkantoor van de Groep Belle dat hierboven ' wordt verklaard.

DK Vi, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, erklærer hermed, at hvis det i dette certifikat beskrevne produkt er købt hos en autoriseret Belle Group forhandler i EU, er det i overensstemmelse med følgende EØF-direktiver: 98/37/EF, 73/23/EØF (som ændret ved 93/68/EØF), 89/336/EØF (som ændret ved 92/31/EØF), 93/68/EØF og tilknyttede, harmoniserede standarder, hvor relevant. Støjniveauet er i overensstemmelse med direktiv 2000/14/EF, bilag VI gældende for maskiner under paragraf 12. Det bemyndigede organ er **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, Storbritanien**.

PRODUCT TYPE	**TYPE DE PRODUIT.....**	**TIPO DE PRODUCTO .....**	**TIPO DE PRODUCTO .....**
MODEL.....	**MODELE.....**	**MODELO .....**	**MODELO.....**
SERIAL No.....	**N° DE SERIE .....**	**N° DE SERIE.....**	**NO. DE SÉRIE .....**
DATE OF MANUFACTURE.	**DATE DE FABRICATION .....**	**FECHA DE FABRICACIÓN..**	**DATA DE FABRIC**
SOUND POWER LEVEL MEASURED..... (GUARANTEED).....	**NIVEAU DE PUISSANCE SONORE MESUREE..... (GARANTIE).....**	**NIVEL DE POTENCIA ACÚSTICA MEDIDO ..... (GARANTIZADO).....**	**NIVEL DE POTÊNCIA DE SOM MEDIDO..... (GARANTIDO).....**
WEIGHT.....	**POIDS.....**	**PESO.....**	**PESO .....**
PRODUCTTYPE	**PRODUKTTYPE.....**		
MODEL.....	**MODEL .....**		
SERIENUMMER.....	**SERIENR. .....**		
FABRICAGEDATUM.....	**FREMSTILLINGSDATO .....**		
GEMETEN GELUIDSSTERKTENIVEAU (GEGARANDEERD)	**LYDEFFEKTNIVEAU MÅLT..... (GARANTERET).....**		
GEWICHT.....	**VÆGT.....**		

Belle GROUP

Signed by: Ray Neilson
Signature:
Medido por:
Assinado por:
Getekend door:
Uunderskrevetaf:

Managing Director - On behalf of BELLE GROUP (SHEEN) UK.
Le Directeur Général - Pour le compte de la SOCIETE BELLE GROUP (SHEEN) UK.
Director Gerente - En nombre de BELLE GROUP (SHEEN) UK.
Director-Geral - Em nome de BELLE GROUP (SHEEN) UK.
Algemeen Directeur - Namens BELLE GROUP (SHEEN) UK.
Administrerende direktør – På vegne af BELLE GROUP (SHEEN) UK.

EGKONFORMITÄTSERKLÄRUNG / DICHIARAZIONE CE DI CONFORMITÁ / EG-VERKLARING VAN OVEREENSTEMMING / EC SAMSVARSERKLÆRING / EY-YHDENMUKAISUUSILMOITUS / DEKLARACJA ZGODNOSCI Z PRZEPISAMI UE

D Wir, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Großbritannien**, bestätigen hiermit, dass das in diesem Zertifikat beschriebene Produkt, wenn es von einem autorisierten Belle Group Händler innerhalb der europäischen Gemeinschaft gekauft wurde, folgenden EG-Richtlinien entspricht: 98/37/EG, 73/23/EG (geändert durch 93/68/EG), 89/336/EG (geändert durch 92/31/EG), 93/68/EG und, wenn zutreffend, den harmonisierten Normen. Geräuschemissionen entsprechen der Richtlinie 2000/14/EG, Anhang VI, für Maschinen unter Artikel 12: die benannte Stelle ist **AV Technology Limited, AVTECH House, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB.**
Geräuschtechnische Dokumente stehen in unserer Zentrale unter obig angegebener Adresse zur Verfügung.

I Il **Gruppo Belle Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB,** certifica che il prodotto descritto nel presente certificato è acquistato da un concessionario autorizzato del gruppo Belle nell'ambito CEE e che è pienamente conforme alle seguenti direttive CEE: 98/37/EC, 73/23/EEC (emendamento 93/68/CEE), 89/336/EEC (emendamento 92/31/CEE), 93/68/CEE e relativi standard armonizzati. Livelli acustici sono in conformità con la direttiva 2000/14/EC Annex VI per macchine coperte dall' articolo 12. L'ente di riferimento è **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB.**
Dati tecnici relativi ai livelli acustici sono disponibili su richiesta dalla sede madre Belle Group al sopra citato indirizzo.

S Undertecknade, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, Storbritannien**, intygar härmed att en produkt beskriven i detta certifikat som köps från en godkänd Belle Group återförsäljare inom EU stämmer överens med följande EG-direktiv: 98/37/EG, 73/23/EG (ändrat genom 93/68/EEC), 89/336/EG (ändrat genom 92/31/EG), 93/68/EG och tillhörande harmoniserade standarder i tillämpliga fall. Buller nivån överensstämmer med Direktiv 2000/14/EC Bilaga VI gällande maskiner under artikel 12, den aviserade organisationen är **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, Storbritannien.**
Teknisk dokumentation vad gäller test av maskiners ljud/bullernivå finns dokumenterad hos Belle-Groups huvudkontor i Sheen, England.

NO Vi, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, bekrefter med dette at det produktet som står beskrevet i denne erklæringen er kjøpt fra en autorisert Belle Group forhandler innen EØF, og at det oppfyller følgende direktiver: 98/37/CE dette direktivet er et sammendrag av det opprinnelige maskindirektivet 89/392/EØF), Det elektromagnetisk kompatabiltets-direktivet 89/336/EØF (som endret av 92/31/EØF og 93/68/EØF). Lavspenningsdirektivet 73/23/EØF, BS EN ISO 12100-1:2003, Sikkerhet til maskineri og tilhørende harmoniserte standarder, hvor atuelt. Støyemisjon er i samsvar med direktiv 2000/14/EC, vedlegg VI, for maskiner. Organet som skal informeres under artikkel 12 er **AV Technology Limited, AVTECH House, Birhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB.**
Lydtekniske filer er arkivert hos Bell Group Hovedkontor med adresse som nevnt ovenfor.

SF Me, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB,** ilmoitamme täten, että jos tässä todistuksessa kuvattu tuote on ostettu valtuutetulta Belle Groupin myyjältä ETY:n alueella, se on yhdenmukainen seuraavien ETY-direktiivien kanssa: 98(37/EY (Tämä direktiivi on yhdistelmä alkuperäisestä konedirektiivistä 89/392/ETY, sähkömagneettisen yhteensopivuuden direktiivistä 89/336/ETY, korjauksineen 92/31/ETY ja 93/68/ETY), matalajännitedirektiivistä 73/23/ETY, koneturvallisuusstandardista BS EN ISO 12100-1:2003 ja siihen liittyvistä yhdenmukaistetuista standardeista, tapauksen mukaan. Melumittaus mittaus on laadittu direktiivin 2000/14/EC Kohdan VI artiklan 12 mukaisille koneille mukaan. Mittauksen suorittaja on **AV Technology Limited, AVTECH House, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB**.
Melumittausten teknilliset arvot ovat saatavana Belle Group pääkonttorin ylläolevasta osoitteesta.

PL My, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Wielka Brytania**, niniejszym poświadczamy, iż produkt opisany w tym świadectwie został zakupiony od autoryzowanej Belle Group w UE i jest zgodny z następującymi dyrektywami EU: 98/37/EC (ta dyrektywa to konsolidacja oryginalnej dyrektywy na temat maszyn 89/392/EEC), Dyrektywą zgodności elektromagnetycznej 89/336/EEC (z poprawkami wniesionymi przez 92/31/EEC oraz 93/68/EEC), Dyrektywą w sprawie niskich napięć 73/23/EEC, BS EN ISO 12100-1:2003 Bezpieczeństwo maszyn i związane normy harmonizacyjne, tam gdzie to ma zastosowanie. Poziom hałasu jest zgodny z Dyrektywą 2000/14/EC Załącznik VI, organizacja zawiadamiana (odnośnie zgodności) to **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, Wielka Brytania**.
Informacje Techniczne dotyczące poziomu hałasu są przechowywane w Belle Group – adres powyżej.

PRODUKTTYP.....	**TIPO PRODOTTO**	**PRODUKTTYP**.....	**PRODUKTTYP**.....
MODELL	**MODELLO**.....	**MODELL**.....	**MODELL** .....
SERIENNR.....	**SERIE N°**	**SERIE NR.**	**SERIE NR.** .....
HERSTELLUNGSDATU	**DATA DI FABBRICAZIONE**..	**TILLVERKNINGSDATUM**.....	**PRODUKSJONSDATO**.....
SCHALLLEISTUNGSPEGEL GEMESSEN ..... (GARANTIERT).....	**LIVELLO POTENZA SONORA MISURATA** ..... (GARANTITA).....	**LJUDSTYRKA UPPMÄTT**..... (GARANTERAD).....	**LYDKRAFTNIVÅ MÅLT** ..... (GARANTERT) .....
GEWICHT.....	**PESO**	**VIKT**.....	**VEKT**.....
TUOTETYYPPI.....	**TYP PRODUKTO**.....		
MALLI.....	**MODEL**		
VALMISTUSNRO.....	**Nr SERII**.....		
VALMISTUSPÄIVÄ.....	**DATAPRODUKCJI**		
ÄÄNENVOIMAKKUUDEN TASO MITATTU..... (TAATTU)	**POZIOM MOCY DŹWIĘKU ZMIERZONY** ..... (GWARANTOWANY).....		
MASSA.....	**WAGA**		

Unterzeichnet vo:
Firmato da:
Undertecknat:
Signatur:
Allekirjoitus:
Podpisa³:

Ray Neilson

Generaldirektor – Im auftrag von BELLE GROUP (SHEEN) UK.
Amministratore Delegato – Per conto di BELLE GROUP (SHEEN) UK.
V.D. – På vägnar av BELLE GROUP (SHEEN) UK.
Managing Director - På vegne av SOCIETE BELLE GROUP (SHEEN) UK.
Toimitusjohtaja - BELLE GROUP (SHEEN) UK: n puolesta.
Dyrektor Zarządzający – w imieniu BELLE GROUP (SHEEN) UK

How To Use This Manual

This manual has been written to help you operate and service the Belle Group BHB Hydraulic Breaker safely.
This manual is intended for dealers and operators of the Belle Group BHB Hydraulic Breaker.

Foreword

The '***Machine Description***' section helps you to familiarise yourself with the machine's layout, controls and Decals.

The '***Safety Instructions***' sections explain how to use the machine to ensure your safety and the safety of the general public.

The ***'Operating Instructions'*** section helps you with the setting up and use of the machine.

The '***Service & Maintenance***' section is to help you with the general maintenance and servicing of your machine.

The ***'Environment'*** section gives instructions on how to handle the recycling of discarded apparatus in an environmentally friendly way.

The '***Trouble Shooting Guide'*** helps you if you have a problem with your machine.

The '***Warranty***' section details the nature of the warranty cover and claims procedure.

The ***'Declaration Of Conformity'*** section shows the standards that the machine has been built to.

Directives with regard to the notations.
Text in this manual to which special attention must be paid are shown in the following way:

CAUTION *The product can be at risk. The machine or yourself can be damaged or injured if procedures are not carried out in the correct way.*

WARNING *The life of the operator can be at risk.*

WARNING

WARNING Before you operate or carry out any maintenance on this machine **YOU MUST READ** and **STUDY** this manual.

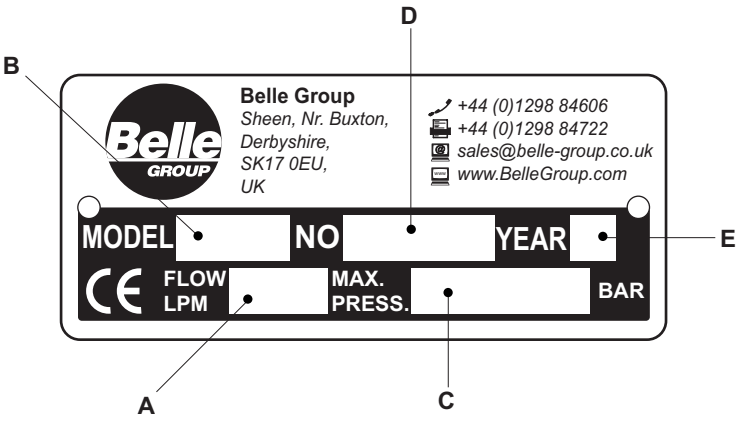
KNOW how to safely use the unit's controls and what you must do for safe maintenance.
(Be sure that you know how to switch the machine off before you switch on, in case you get into difficulty.)
ALWAYS wear or use the proper safety items required for your personal protection.
If you have **ANY QUESTIONS** about the safe use or maintenance of this unit, ASK YOUR SUPERVISOR OR CONTACT THE BELLE GROUP +44 (0)1298 84606

Contents

How to use this manual 4
Warning 4
Machine Description 5
Technical Data 6
Matching The Breaker To The Power Source 7
Safety Instructions ..... 8 - 10
General Safety 11
Recommended Hydraulic Oil 11
Storage 11
Environment 12
Pre-Start Checks 12
Start and Stop Procedure 12
Operating Instructions ..... 13 - 15
EHTMA - Code Of Practice 15
Service & Maintenance 16
Trouble Shooting Guide 17
Warranty 17
Declaration of Conformity 2

Belle Group reserves the right to change machine specification without prior notice or obligation.

Serial Plate



A. Maximum permitted Hydraulic Oil Flow.
B. Breaker Model.
C. Maximum permitted Hydraulic Pressure.
D. Serial Number.
E. Year of Manufacture.

Decals

A. Model Decal

This Decal shows the Model Name of the Breaker. E.g 'BHB 19'

B. Noise Decal

This Decal shows the Noise Level of the machine.

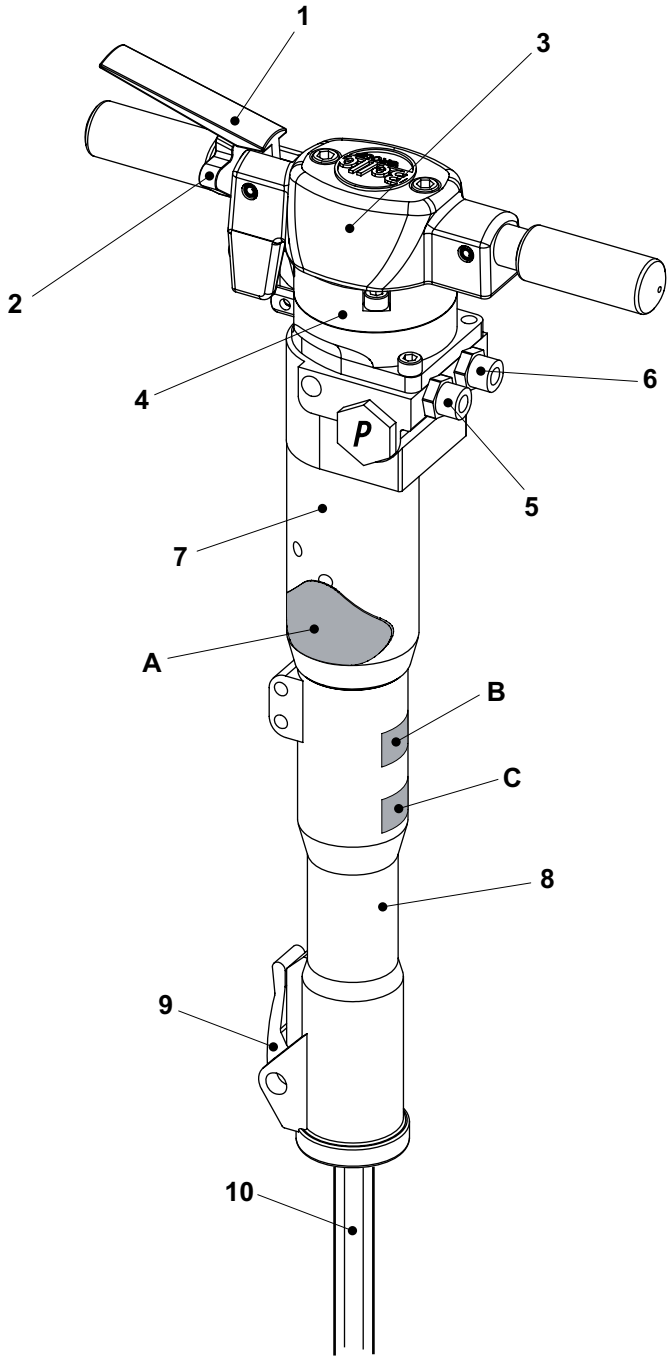
C. CE Decal

This Decal indicates whether the machine conforms to CE Regulations. The Decal will not be found on USA machines.

Machine Components

1. Trigger
2. Trigger Lock
3. Head
4. Accumulator
5. Oil In (P*)
6. Oil Return (T**) (Restrictor - Please see 'Technical Data' section)
7. Main Body
8. Nose Section
9. 'Steel' Latch
10. Steel

* P = Pressure
** T = Tank



GB Technical Data

Model	BHB12	BHB19	BHB23	BHB19 USA	BHB25X
Restrictor	Open	Open	Open	Open	Open
Weight (Kg)	14	19	23.5	19	27.5
Hydraulic Flowrate (Ltrs/Min)	20	20	20	20	20
Working Pressure (Bar)	70 - 90	90 - 110	90 - 110	90 - 110	90 - 110
Max Pressure (Bar)	160	160	160	160	160
Max. Return Line Pressure (Bar)	10	10	10	10	10
EHTMA Category	C	C	C	C	C
Hydraulic Connections	1/2 BSP	1/2 BSP	1/2 BSP	1/2 JIC	1/2 BSP
	Flat Faced, Quick Release, Non-Drip Couplings				
Hydraulic Oil Type					
- Below 30ºc	ISO VG T32				
- Above 30ºc	ISO VG T46				
Blow Frequency (Blows/Min)	2400	1600	1600	1600	1600
Accumulator Gas Pressure (Bar)	40	40	40	40	40
Steel Size (mm)	22 x 82	25 x 108	25 x 108	32 x 152	32 x 160
Recommended Power Pack	Cub 20/90 Midi 20/140	Cub 20/90 Midi 20/140	Cub 20/90 Midi 20/140	Midi 20/140 Major 20/140	Midi 20/140 Major 20/140
Prelimenary Vibration - Cub (m/s^2)	14.13	9.78	9.78	9.78	6.00
Prelimenary Vibration - Midi (m/s^2)	16.08	11.97	11.97	11.97	6.00
Noise Level - Cub (dB(A))	101.74	102.67	102.67	102.67	107.00
Noise Level - Midi (dB(A))	104.30	104.03	104.03	104.03	107.00

Model	BHB25	BHB27 *		BHB30 USA *	
Restrictor (mm)	3.8	**3.4**	**Open**	**3.8**	**Open**
Weight (Kg)	28	28	28	31.5	31.5
Hydraulic Flowrate (Ltrs/Min)	20	**20**	**30**	**20**	**30**
Working Pressure (Bar)	105 - 125	105 - 125	105 - 125	105 - 125	105 - 125
Max Pressure (Bar)	160	160	160	160	160
Max. Return Line Pressure (Bar)	20	20	20	20	20
EHTMA Category	C	**C**	**D**	**C**	**D**
Hydraulic Connections	1/2 BSP	1/2 BSP	1/2 BSP	1/2 JIC	1/2 JIC
	Flat Faced, Quick Release, Non-Drip Couplings				
Hydraulic Oil Type					
- Below 30ºc	ISO VG T32				
- Above 30ºc	ISO VG T46				
Blow Frequency (Blows/Min)	1300	1300	2150	1150	1850
Accumulator Gas Pressure (Bar)	50	50	50	50	50
Steel Size (mm)	32 x 160	32 x 160	32 x 160	32 x 152	32 x 152
Recommended Power Pack	Midi 20/140 Major 20/140	Midi 20/140 Major 20/140	Major 30/140	Midi 20/140 Major 20/140	Major 30/140
Prelimenary Vibration (m/s^2)	11.1	11.8	18.61	10.75	16.06
Noise Level (dB(A))	106.36	105.86	105.34	107.16	105.73

* **NOTE:-** Breakers are supplied with alternative return pipe restrictors. Please ensure correct restrictor is fitted for 20 or 30 Litre supply. (Restrictor size is marked on the restrictor body) **NO MARKINGS = OPEN RESTRICTOR**
More information can be found on the next page.

Matching The Breaker To The Power Pack

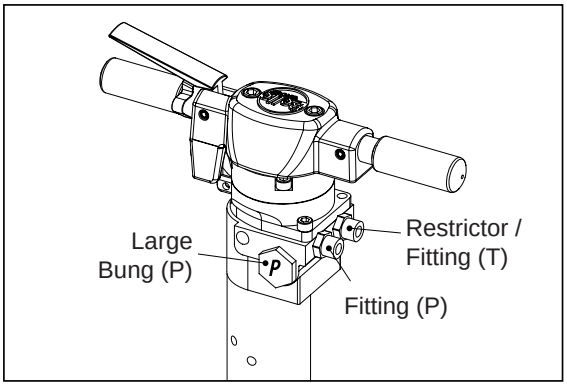
GB

Restrictor / Fitting Identification
The tank Restrictors / Fittings can be identified by using this simple procedure.

Check your Breaker and identify the P and T side of the body by looking for a letter stamp on the large bung. This can be found on the side of the Breaker as shown in the diagram. This stamp also corresponds to the Restrictor / Fitting on the same side of the Breaker

For example: In the image the bung on the left hand side of the Breaker is clearly stamped with the letter P, so the fitting on the left hand side will be the Pressure Line and the right hand side will be the Tank / Return Line.

P = Pressure side of the Breaker
T = Tank / Return side of the Breaker



WARNING *You must only ever change the TANK Line Restrictor / Fitting as you may cause harm to your Breaker and Power Pack if the PRESSURE Line Fitting is changed.*

BHB27 & BHB30 USA ONLY!!
At delivery, the Breaker is intended for an oil flow of 30 Ltrs/Min (E.H.T.M.A. Category D). If the Breaker is to be connected to a Hydraulic Power Pack with an Oil Flow of 20 Ltrs/Min (E.H.T.M.A. Category C) the Restrictor / Fitting of the tank line (T) must be replaced:- See Item 6 of 'Machine Description' section.

Restrictors / Fittings

Oil Flow Rate	EHTMA Category	Part Number	Restrictor Size	Notes
20 Ltrs/Min	C	971/99061	3.4mm	Delivered with the Breaker (Loose)
30 Ltrs/Min	D	971/99006	No Restrictor (Open)	Fitted onto the Breaker

CAUTION *Connecting the Breaker to a higher oil flow rate may cause damaged to the Power Pack or to the Breaker.* ***DO NOT*** *attempt to change the Restrictor immediately after use as the Hydraulic Oil will be hot.*

Replacing The Restrictor
1. Disconnect the Breaker from the Power Pack.
2. Fix the Breaker in vertical position to a vice or in another way so that the Breaker is fixed. Do not place it on the Nose Section because the Breaker can tilt.
3. Remove the Tank Line Hose, leaving the Restrictor / Fitting in the Breaker body. Remember to have an oil pan ready to take the oil spill from the Breaker. Drain the oil from the T-Hose into the oil pan.
4. Loosen the Restrictor on the Breaker. Remember to have an oil pan ready to take the oil spill from the Breaker.
5. Remove the Seal from the old Fitting / Restrictor. Fit the new Restrictor using the existing Seal, ensuring that the internal Allen Key head in the Restrictor is fitted into the Breaker body first. Tighten to a Torque Setting of 90±2 Nm.
6. Refit the Hose and tighten to a Torque Setting of 50±2 Nm.
7. Reconnect the Breaker to Power Pack and check it for leakage.

NOTE:- When the Breaker is modified to another oil flow rate, do not connect a Power Pack with higher oil flow rate.
We recommend that the EHTMA Label on the Breaker is changed to Category C (Green) (Supplied loose with Breaker)), if Restrictor (971/99061) is fitted. Section A of the Serial Plate (See 'Machine Description' section) should also be amended.

GB Safety Instructions

WARNING

To reduce risk of serious injury or death to yourself or others, read these safety instructions before operating the machine. Post these safety instructions at work locations, provide copies to employees, and make sure that everyone reads the safety instructions before operating or servicing the machine. Follow all safety instructions given in this manual. All the safety instructions conform to the applicable laws and directives of the European Union. You should also respect any additional national/regional directives. In countries outside the European Union, the valid local statutes and regulations shall apply. Any additional regional laws and regulations must be observed.

Machine and Tool operating Hazards

Sudden or unexpected movement of the machine may occur during operating, which may cause injuries. Furthermore, losing your balance or slipping may cause injury. To reduce risks:

- *Make sure that you always keep a stable position with your feet as far apart as the width of your shoulders, and keeping your body weight balanced out.*
- *Stand firmly and always hold on to the machine with both hands.*
- *Do not start the machine when it is lying on the ground.*
- *Make sure that the handles are clean and free from grease and oil.*

Unintentional start of the machine may cause injury!

- *Keep your hands away from the start and stop device until you are ready to start work.*

The working tool is exposed to heavy strains when the machine is used and after a certain amount of use the tool may break due to fatigue. If the tool breaks, there may be sudden or strong movements. Such sudden or strong movements may cause serious injury.

- *Make sure that you always keep a stable position with your feet as far apart as the width of your shoulders, and keeping your body weight balanced.*
- *Keep your hands and feet away from the working tool.*
- *Do not 'ride' on the machine with one leg over the handle, since you could be seriously injured if the tool were to break suddenly.*
- *Check regularly for wear to the working tool, and check whether there are any signs of damage or visible cracks.*

An incorrect dimension of the working tool's shank can result in the working tool being lost or slipping out during operation. A working tool that is lost or slips out can cause personal injury.

- *Before inserting the work tool, make sure that the shank's dimensions are correct for use in the machine.*
- *Working tools without a collar may not be used.*

If the tool retainer on the machine is not in a locked position, the tool can be ejected with force, which can cause personal injury.

- *Once the working tool has been mounted and locked, the locking function must be checked by pulling the working tool outwards forcefully.*
- *Make sure that the tool is fully inserted and the tool retainer is in the locked position before the machine is started.*
- *Never point the working tool at yourself or anyone else.*

Starting the machine while changing the working tool may cause personal injury.

- *Before changing the tool, stop the machine, switch off the hydraulic oil supply and bleed the machine by activating the start and stop device.*

A hydraulic hose that comes loose can lash around and cause personal injury or death. To reduce risks:

- *Check that the hydraulic hose and the connections are not damaged.*
- *Check that all hydraulic connections are properly attached.*
- *Never attempt to disconnect a hydraulic hose that is pressurized. First switch off the hydraulic oil flow by the power pack and then bleed the machine by activating the start and stop device.*

Accumulator Hazard

The machine has a pressure accumulator. The pressure accumulator may only be charged with nitrogen gas (N_2).

- *Only authorized personnel are qualified to work with the accumulator.*
- *Do not perform any work on the machine, the connections or any hoses, when the hydraulic system is pressurized.*

NOTE!:- If the maximum working pressure for the machine is exceeded, the accumulator can be overcharged, which can result in material damage.

- Always run the machine with the correct working pressure. See "Technical Data" section.

Hydraulic Oil and Lubrication Hazards

Thin jets of hydraulic oil under high pressure can penetrate the skin and cause permanent damage.

- *Never use your hands when searching for oil leaks.*
- *Keep your face away from any possible leaks.*
- *Immediately seek medical attention if hydraulic oil has penetrated the skin.*

Spilled hydraulic oil can cause accidents by causing slippery conditions and will also harm the environment.

- *Handle the hydraulic oil with care.*
- *Take care of all spilled oil and handle it according to your local safety and environmental regulations.*

Hot hydraulic oil can cause burns.

- *Never dismount the machine when the hydraulic oil is hot.*

Hydraulic oil can cause eczema when it comes in contact with the skin.

- *Avoid getting hydraulic oil on your hands.*
- *Always use protective gloves when working with hydraulic oil.*

Grease can cause eczema when it comes in contact with the skin.

- *Avoid getting grease on your hands.*

Explosion and Fire Hazard

Breaking, drilling and working with certain materials can cause sparks, which may ignite explosive gases and cause explosions. Explosions may cause serious injury or death. To reduce such risk of explosion:

- *Never operate the machine in any explosive environment.*
- *Do not use the machine near flammable materials, fumes or dust.*
- *Make sure that there are no undetected sources of gas.*

Electrical/Concealed Object Hazards

The machine is not electrically insulated. If the machine comes into contact with electricity, serious injuries or death may result.

- *To reduce the risk of such injury or death, never operate the machine near any electric wire or other source of electricity.*
- *Make sure that there are no concealed wires or other sources of electricity.*

During breaking, concealed wires and pipes constitute a danger that can result in serious injury.

- *Before you start breaking, check the composition of the material you are to work on.*
- *Watch out for concealed cables and pipes e.g. electricity, telephone, water, gas and sewage lines etc.*
- *If the tool seems to have hit a concealed object, switch off the machine immediately.*
- *Make sure that there is no danger before continuing.*

Projectile Hazard

During breaking, drilling or hammering, splinters or other particles from the worked material may become projectiles and cause personal injury by striking the operator or other persons.

- *Use approved personal protective equipment, including impact resistant safety glasses with side protection, to reduce the risk of being injured by a projectile.*

Noise Hazard

High sound levels may cause permanent hearing loss.

- *Use hearing protection in accordance with occupational health and safety regulations.*

Silica/Dust Hazard

Exposure to crystalline silica (sometimes called 'silica dust') as a result of breaking, drilling, hammering, or other activities involving rock, concrete, asphalt or other materials may cause silicosis (a serious lung disease), silicosis-related illnesses, cancer, or death. Silica is a major component of rock, sand and mineral ores. To reduce silica exposure:

- *Use proper engineering controls to reduce the amount of silica in the air and the build-up of dust on equipment and surfaces. Examples of such controls include: Exhaust ventilation and dust collection systems, water sprays, and wet drilling. Make sure that controls are properly installed and maintained.*
- *Wear, maintain, and correctly use approved particulate respirators when engineering controls alone are not adequate to reduce exposure below permissible levels.*
- *Participate in air monitoring, medical exams, and training programs offered by your employer and when required by law.*
- *Wear washable or disposable protective clothes at the worksite; shower and change into clean clothes before leaving the worksite to reduce exposure of silica to yourself, other persons, cars, homes, and other areas.*
- *Do not eat, drink, or use tobacco products in areas where there is dust containing crystalline silica.*
- *Wash your hands and face before eating, drinking, or using tobacco products outside of the exposure area.*
- *Work with your employer to reduce silica exposure at your worksite.*

Some dust, fumes or other airborne material created during use of the machine may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of such chemicals are:

- *Crystalline silica and cement and other masonry products.*
- *Arsenic and chromium from chemically-treated rubber.*
- *Lead from lead based paints.*

To reduce your exposure to these chemicals, work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

Machine Modification Hazard

Any machine modification not approved by Belle Group may result in serious injuries to yourself or others.

- *The machine must not be modified without Belle Groups permission.*
- *Use only original parts and accessories approved by Belle Group.*

Vibration Hazard

Normal and proper use of the machine exposes the operator to vibration. Regular and frequent exposure to vibration may cause, contribute to, or aggravate injury or disorders to the operator's fingers, hands, wrists, arms, shoulders and/or other body parts, including debilitating and/or permanent injuries or disorders that may develop gradually over periods of weeks, months, or years. Such injury or disorder may include damage to the blood circulatory system, damage to the nervous system, damage to joints, and possibly damage to other body structures.

If numbness, tingling, pain, clumsiness, weakened grip, whitening of the skin, or other symptoms occur at any time, when operating the machine or when not operating the machine, do not resume operating the machine and seek medical attention. Continued use of the machine after the occurrence of any such symptom may increase the risk of symptoms becoming more severe and/or permanent.

The following may help to reduce exposure to vibration for the operator:

- *Let the tool do the job. Use a minimum hand grip consistent with proper control and safe operation.*
- *When the impact mechanism is activated, the only body contact with the machine you should have is your hands on the handles. Avoid any other contact, e.g. supporting any part of the body against the machine or leaning onto the machine trying to increase the feed force. It is also important not to keep the trigger engaged while extracting the tool from the broken work surface.*
- *Make sure that the inserted tool is wellmaintained (including sharpness, if a cutting tool), not worn out, and of the proper size. Working tools that are not well-maintained, or that are worn out, or that are not of the proper size result in longer time to complete a task (and a longer period of exposure to vibration) and may result in or contribute to higher levels of vibration exposure.*
- *Immediately stop working if the machine suddenly starts to vibrate strongly. Before resuming the work, find and remove the cause of the increased vibrations.*
- *Comply with the recommended hydraulic pressure when operating the machine. Either higher or lower hydraulic pressure has the potential of resulting in higher levels of vibration.*
- *Do not grab, hold or touch the inserted tool when using the machine.*
- *Participate in health surveillance or monitoring, medical exams, and training programs offered by your employer and when required by law.*

NOTE!:- *See the Noise and Vibration Levels for the machine, which can be found in the Technical Data section*

General Safety

GB

- *Machines and accessories must only be used for their intended purpose.*
- *Only qualified and trained persons may operate or maintain the machine.*
- *Learn how the machine is switched off in the event of an emergency.*
- *Release the start and stop device immediately in all cases of power supply interruption.*
- *Always inspect the equipment prior to use. Do not use the equipment if you suspect that it is damaged.*
- *Always use your common sense and good judgment.*
- *Pay attention and look at what you are doing.*
- *Do not use the machine when you are tired or under the influence of drugs, alcohol or anything else that may affect your vision, reactions or judgment.*
- *Participate in safety and training courses.*
- *Never strike or abuse any equipment.*
- *Keep the machine and tools in a safe place, out of the reach of children and locked up.*
- *Make sure that all the attached and related equipment is properly maintained.*
- *Decals bearing important information regarding personal safety and care of the machine are supplied with every machine.*
- *Make sure that the decals are always legible.*
- *New decals can be ordered from the Spare Parts list.*
- *Make sure that no unauthorized personnel trespass into the working zone.*
- *Keep the workplace clean and free from foreign objects.*
- *Never point a hydraulic hose at yourself or anyone else.*

PPE (Personal Protective Equipment)

Always use approved protective equipment. Operators and all other persons in the working area must wear protective equipment, including at a minimum:

- *Protective helmet.*
- *Safety Goggles,*
- *Gloves,*
- *Ear Defenders,*
- *Dust Mask*
- *Steel Toe capped footwear.*

Wear clothing suitable for the work you are doing. Tie back long hair and remove any jewellery which may catch in the equipment's moving parts.

Recommended Hydraulic Oil

GB

In order to protect the environment, Belle Group recommends the use of biologically degradable hydraulic oil.

- *Viscosity (preferred) 20-40 cSt.*
- *Viscosity (permitted) 15-100 cSt.*
- *Viscosity index Min. 100.*

Standard mineral or synthetic oil can be used. When the breaker is used continuously, the oil temperature will stabilise at a level which is called the working temperature. This will, depending on the type of work and the cooling capacity of the hydraulic system, be between 20-40°C (68-104°F) above the ambient temperature.

At working temperature, the oil viscosity must lie within the preferred limits. The viscosity index indicates the connection between viscosity and temperature. This is the reason why a high viscosity is preferred, because then the oil can be used within a wider temperature range. The breaker shall not be used, if oil viscosity fails to remain within the permitted area, or if the working temperature of the oil does not fall between ÷20°C (÷4°F) and 70°C (158°F).

Storage

GB

- Disconnect the breaker's hoses from the power source. See "Start and Stop Procedure" section
- Make sure that the breaker is properly cleaned before storage.
- In case of long-term storage, the striking piston must be protected against corrosion. This is done by pressing it (through the chisel bushing) to its upper position by means of a tool placed up-side-down. As the quick-release couplings are blocked when disassembled, the striking piston must be pressed upwards with the hoses mounted but the power pack unactivated.
- Always store the machine in a dry place.

GB Environment

A used machine must be treated and disposed of in such a way that the greatest possible portion of the material can be recycled and any negative influence on the environment is kept as low as possible.

NOTE:-
Before a used machine is scrapped, it must be emptied and cleaned from all hydraulic oil. Remaining hydraulic oil must be deposited.

GB Pre-Start Checks

Pre-Start Checks
The following checks should be made each time you start to use the breaker. All these checks concern the serviceability of the breaker. Some concern your safety:

- *Clean all Decals. Replace any that are missing or cannot be read. These can be ordered from the Spare Parts list.*
- *Inspect the hoses generally for signs of damage.*
- *Inspect the working tool for wear and damage.*
- *Do not use an excessively worn or damaged tool.*
- *Connect the tool.*
- *Ensure that the hydraulic couplings are clean and fully serviceable.*
- *Do not invert the breaker without first isolating it from the power source. The working tool might be fired out while connecting it, if the breaker is connected to the power source.*
- *Ensure that any power source you plan to use is compatible with the breaker model used (see the "Technical data" section). Belle Group recommends using an LFD oil flow divider, if the flow from the power source can exceed the maximum allowed oil flow.*

GB Start and Stop Procedure

Starting
1) Check that the 'Steel' is in good condition and pressed fully home in the nose of the breaker.
2) Check that the latch is locked, so that the 'Steel' does not fall out.
3) Remove the protective caps from the quick-release couplings.
4) Clean the quick-release couplings if needed and connect the tail-hoses to the extension hoses of the power unit.
5) Place the breaker at a right angle on the material to be broken and activate the trigger lever.

Stopping
1) Release the trigger. Press the breaker against the surface, until the breaker has stopped completely.
2) Stop the power source.
3) Disconnect the hoses and fit the protective caps to the quick-release couplings.

Operating Instructions

To reduce the risk of serious injury or death to yourself or others, before operating the machine, read the Safety instructions section found on the previous pages of this booklet.

Design and Function

The Belle Group BHB Range of handheld Hydraulic Breakers are sturdy and reliable breakers designed for working together with Belle Group Hydraulic Power Packs.

The handheld Breakers are available in many different sizes with varying impact energies and commonly used tool sizes. The handheld Breakers are designed for various jobs from light brickwork and asphalt jobs to heavy duty jobs in reinforced concrete.

All Belle Group BHB Range handheld breakers are delivered with ½" tail-hoses with ½" Flat-Face quick-release couplings for easy connection to the Belle Group Hydraulic Power Packs.

Choosing the correct hydraulic breaker for a task

It is important to choose the correct size of hydraulic breaker for the work to be performed.
A hydraulic breaker that is too small means that the work will take longer.
A breaker that is too big means that there must be frequent repositioning, which is unnecessarily tiring for the operator.
A simple rule for choosing the correct size of hydraulic breaker is that a normal sized piece of broken material should be removed from the workpiece within 10–20 seconds of operation.

- *If it takes less than 10 seconds a smaller hydraulic breaker should be selected.*
- *If it takes more than 20 seconds a larger hydraulic breaker should be selected.*

Installation

Hoses

For connection of the breaker, the hydraulic hose must be approved for a working pressure of at least 200 bar (2900 psi) and have a ½" inner diameter. To resist exterior wear and tear, we recommend using a 2-layer hydraulic hose. The breaker connection marked P (pump) is oil inlet, and the connection marked T (tank) is oil outlet.

Quick-release couplings

The original Belle Group hydraulic hoses are fitted with Flat-Face quick-release couplings that are strong and easy to clean. The quick-release couplings are fitted so that the male connection supplies oil and the female connection receives oil.

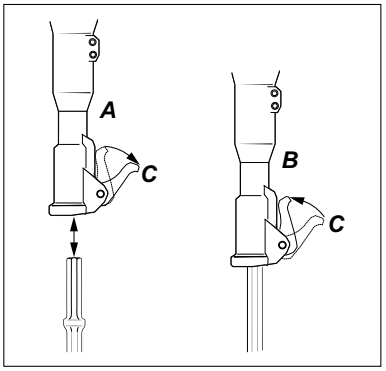
Fitting and Removing the Breaker 'Steel'

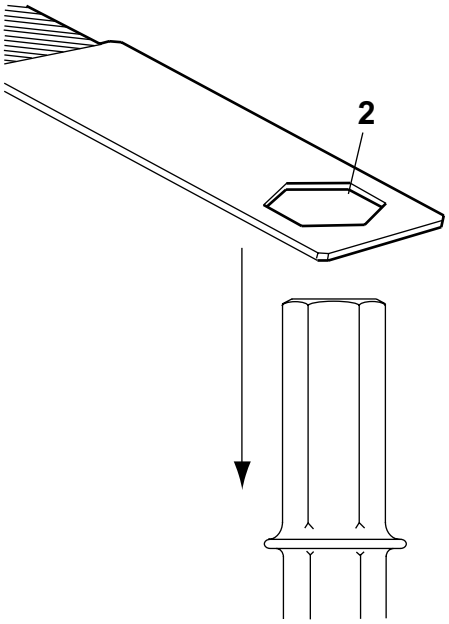
Whenever fitting/removing the 'Steel', the following instructions must be observed:

1) To prevent an accidental start, switch off the oil supply. Bleed the machine by pressing the start/stop device. Disconnect the machine from the power source.

2) Remove the 'Steel' by swinging the latch (C) fully down (Image A).

3) Fit a 'Steel' by ensuring that the latch (C) is fully down. Then insert the 'Steel' in the breaker as shown and swing the latch (C) fully up (Image B).





Checking for wear

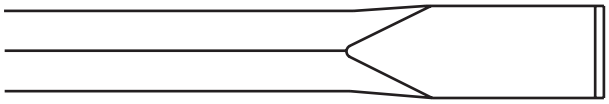
Using a working tool with a worn out shank leads to increased machine vibrations. To avoid increased vibrations, check the shank for wear before the working tool is fitted in the machine.

Use the checking gauge that corresponds to the working tool's shank dimension. If the gauge's hole (2) can be pushed down on the working tool's shank, this means that the shank is worn out and the working tool should be replaced.

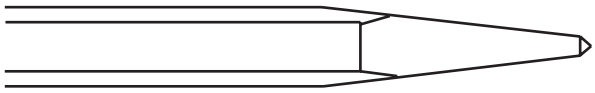
* **Note:-** The Checking Gauge is not supplied with the machine.

Choosing working tool

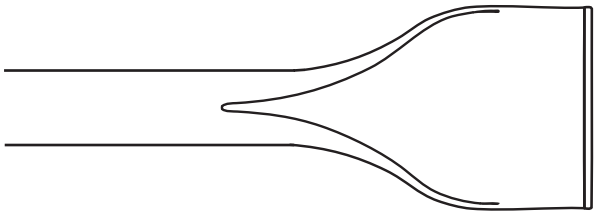
A correct working tool is a prerequisite for good operation. To avoid unnecessary machine damage, it is important to choose working tools of a high quality.



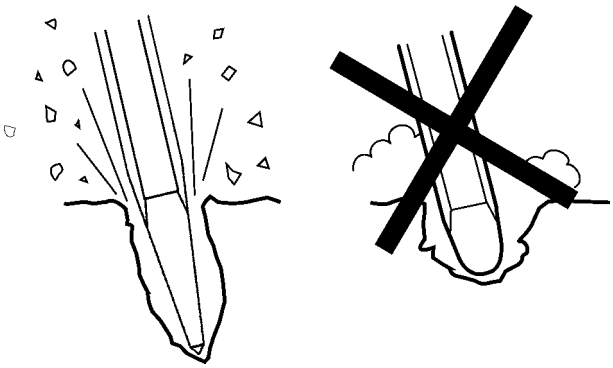
The narrow chisel should be used for demolition and cutting work in concrete and other types of hard material.



The moil point should only be used for creating holes in concrete and other types of hard material.



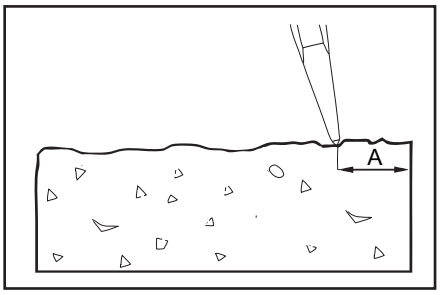
The wide chisel should be used in soft materials e.g. asphalt and frozen ground.



Always use a sharp tool to be able to work effectively. A worn out tool causes increased vibrations and the operation will take longer.

GB Operating Instructions

STARTING A CUT



1) Stand steady and make sure that your feet and hands are at a safe distance from the working Breaker.
2) Press the machine against the surface of the workpiece before starting.
3) Adjust the breaking distance (A) so that the working Breaker does not get stuck.
4) Do not try to cut too big a bite.
5) Trying to loosen a working Breaker that is stuck will expose the operator to unnecessary vibrations.

OPERATION

1) Let the machine do the work; do not press too hard. The vibration-absorbing handle must absolutely not be pressed all the way down to the base.
2) Hydraulic breakers with vibration-absorbing handles: The feed force should be adapted so that the handles are pressed down “half way”. The best vibration damping and breaking effect is achieved at this position.
3) Avoid working in extremely hard materials e.g. granite and reinforcing iron (reinforcement bar), which would cause substantial vibrations.
4) Any form of idling, operating without working tool or operating without adapted feed force must be avoided.
5) When no feed force is applied, the start and stop device must not be activated.
6) Check regularly that the machine is well lubricated.

WHEN TAKING A BREAK

1) During all breaks you must put the machine away so that there is no risk that it will be unintentionally started.
2) In the event of a longer break or when leaving the workplace: Switch off the hydraulic oil supply and then bleed the machine by activating the start and stop device.

GB EHTMA - Code Of Practice

EUROPEAN HYDRAULIC TOOL MANUFACTURERS ASSOCIATION CODE OF PRACTICE – HYDRAULIC BREAKERS

Before Starting. Refer to manufacturer’s operating instructions.
Compatibility. Hydraulic Breakers are designed to operate at a specific Flow and Pressure. Equipment produced by EHTMA members carries a triangular colour coded range identification label. Check that both the Tool and Power Unit have the same identification label before operation. It is imperative that Power Units and Tools having different colour codings are not interconnected as this practice is both inefficient and dangerous.

For reference the EHTMA colour code is as follows:-

Classification	Colour Code.	Flow l/min	Max pressure Bar.
A	Yellow	5.5 – 6.5	180
B	Blue	13.5 – 16.5	172
C	Green	18.0 – 22.0	138
D	Brown	27.0 – 33.0	138
E	Red	36.0 – 44.0	138
F	Black	45.0 – 55.0	138
G	Orange	54.0 – 66.0	138
Z	Grey	9.0 – 11.0	180

If in doubt consult the equipment manufacturer.

Characteristics. Operators not familiar with the use of hydraulic tools should note the following points:-
1) Hydraulic breakers are usually more powerful than the equivalent weight pneumatic tools.
2) The body of the hydraulic breaker and the supply hoses will become quite warm during normal operation.
3) As the breaker has no exhaust it is generally much quieter in operation. This should not be taken as a lack of power.

Steel Selection It is essential that the correct type and size of steel is chosen if optimum performance is to be achieved, with particular reference being made to the shank length and across flat dimensions.

Recommendations as follows:-

Material.	Recommended Steel
Concrete.	Pointed or narrow bladed chisels.
Tarmac.	Sharp edged wide bladed tools with straight cutting edges.
Asphalt.	Sharp edged tools with thin section and curved cutting edges.
General Trenchwork.	Spades and Digger steels.

ALWAYS USE SHARP STEELS - Blunt steels increase vibration and reduce efficiency.

Service and Maintenance

GB

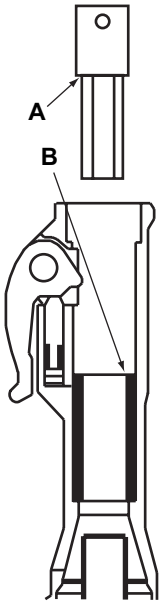
Regular maintenance is a prerequisite for keeping the machine safe and effective. Carefully follow the operating instructions.
Before undertaking any maintenance or changing the working tool on hydraulic machines, always switch off the oil supply and bleed the machine by depressing the start and stop device Then disconnect the hydraulic hose from the machine.

- *Use only authorized parts. Any damage or malfunction caused by unauthorized parts will not be covered by Warranty or Product Liability.*
- *Change damaged parts immediately.*
- *Replace worn components in good time.*
- *Always clean the hose couplings before mounting or dismounting.*
- *Always plug hoses and nipples with clean and tight plugs when dismounting.*
- *When cleaning mechanical parts with solvent, make sure to comply with occupational health and safety regulations, and make sure that there is satisfactory ventilation.*
- *Inspection and service on the accumulator must only be done by a certified person.*
- *For major service to the machine, contact the Belle Group or your nearest authorised dealer.*

NOTE!:- Maintenance must only be done by suitably qualified and competent persons. Before doing any maintenance, make sure that the machine is safe and correctly sited on the ground.

Routine Maintenance	**Every Week**	**Every 3 Months**	**Every 600 Hrs / Yearly**
Clean and inspect the machine.	✓		
Grease the Handle Guides with Silicone (E-Type Handles only)	✓		
Check Hoses and Fittings for cracks or leaks. Replace if necessary.	✓		
Inspect the ‘Steel’ for wear and damage. Do not use an worn or damaged ‘Steel’.	✓		
Check for general damage to the machine.	✓		
If the machine is equipped with Vibration-Absorbing handles, their function should be checked.	✓		
Check that the handles are moving freely (up - down) and do not jam.	✓		
Check that the springs are not damaged.	✓		
Check tightness of nuts, bolts, screws and hose fittings.		✓	
Check the Chisel bushing in the nose for wear and damage.		✓	
Check moving parts, seals and bolts for wear and cracks. Replace if necessary.			✓
Check the function of the machine.			✓

For the machine to maintain the specified vibration values, this should always be checked:
Too big a clearance between the working tool’s shank and the chisel bushing will generate increased vibrations. To avoid exposure to excessive vibrations, check the chisel bushing for wear every day. Use the gauge that corresponds to the working tool’s shank dimension. If the gauge´s part (A) can be pushed fully into the chisel bushing (B), the bushing is worn out and must be replaced! See also “Checking for wear” section for checking the working tool’s shank.



GB Troubleshooting Guide

Problem	Cause	Remedy
Breaker does not work. Pressure is not built up when trigger is activated.	No or incorrect flow/pressure.	Check flow/pressure by means of test equipment.
	P and T hoses interchanged.	Check connection. Standard connection has oil flowing from male quick-release coupling (i.e. the tail-hose of the breaker P connection is fitted with female coupling).
	Insufficient activation of trigger valve.	Adjust trigger lever (if adjustable) or replace defective parts.
	Seals defect in spool channel of valve housing.	Dismount, check and replace seals.
Breaker does not work. Pressure is built up when trigger is activated	Back pressure too high.	Make direct tank connection. Max. back pressure 10-15 bar (150-200 psi) measured at breaker.
	Quick-release coupling in return line defective.	Locate and replace defective coupling.
	Striking piston sticks, possibly due to thickening of cylinder.	Push the breaker hard against the Breaker 'Steel'.
		Chamfer/polish the edge slightly at the cylinder dashpot (where the cylinder bore changes size).
		Check oil viscosity. Thin oil increases the risk of thickening.
	Spool / reversing spool or auxiliary spool sticking easily.	Dismount and check that all parts move. Polish slightly if necessary.
	Seals defective.	Dismount, check and replace.
Breaker runs weakly or irregularly	Insufficient flow.	Check flow/pressure.
	Seals defective.	Replace seals.
	Wear, internal leakage.	Dismantle, check and replace defective or worn parts.
		Check impurity of oil and oil viscosity at working temperature.
		Thin oil = increased internal leakage.
	Insufficient accumulator charge.	Recharge accumulator.
	Diaphragm defective.	Replace diaphragm.
Hoses pulsate	Accumulator defective.	Replace accumulator diaphragm and charge with nitrogen.
Oil leaking from breaker.	Seals defective.	Replace seals.
'Steel' falls out.	Worn latch.	Replace latch and roll pins.
	Worn chisel bushing or 'Steel'.	Replace bushing or 'Steel'.

GB Warranty

Your new Belle Group BHB Hydraulic Breaker is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase. The Belle Group warranty is against defects in design, materials and workmanship.

The following are not covered under the Belle Group warranty:

1. Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
2. Alterations, additions or repairs carried out by persons other than Belle Group or their recognised agents.
3. Transportation or shipment costs to and from Belle Group or their recognised agents, for repair or assessment against a warranty claim, on any machine.
4. Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.

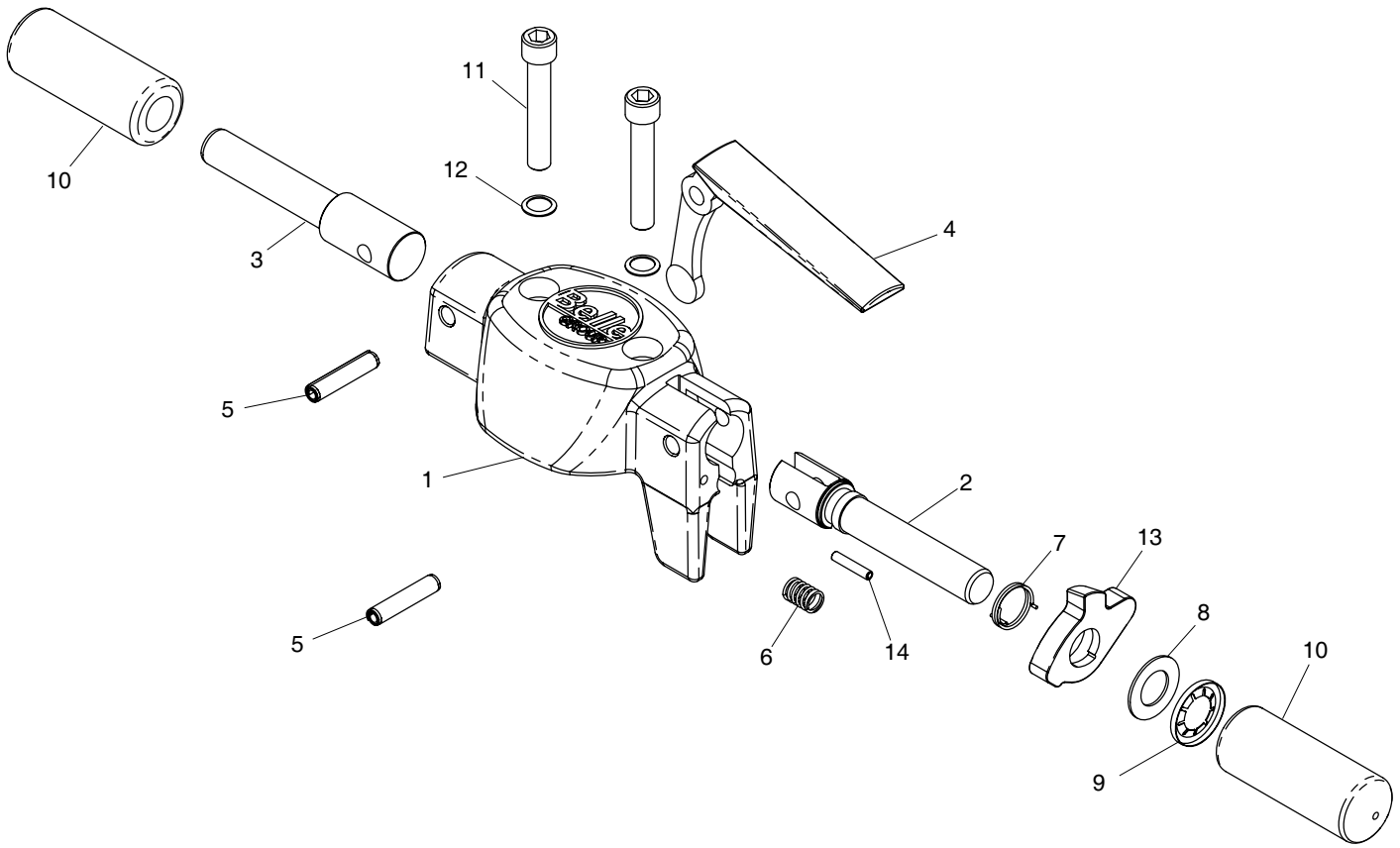
Belle Group and/or their recognised agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

Warranty Claims
All warranty claims should firstly be directed to Belle Group, either by telephone, by Fax, by Email, or in writing.

For warranty claims:
Belle Group Warranty Department,
Unit 5, Bode Business Park,
Ball Haye Green,
Leek,
Staffordshire,
ST13 6BW
England.

Tel : +44 (0)1538 380000, Fax : +44 (0)1538 380038 Email : warranty@belle-group.co.uk

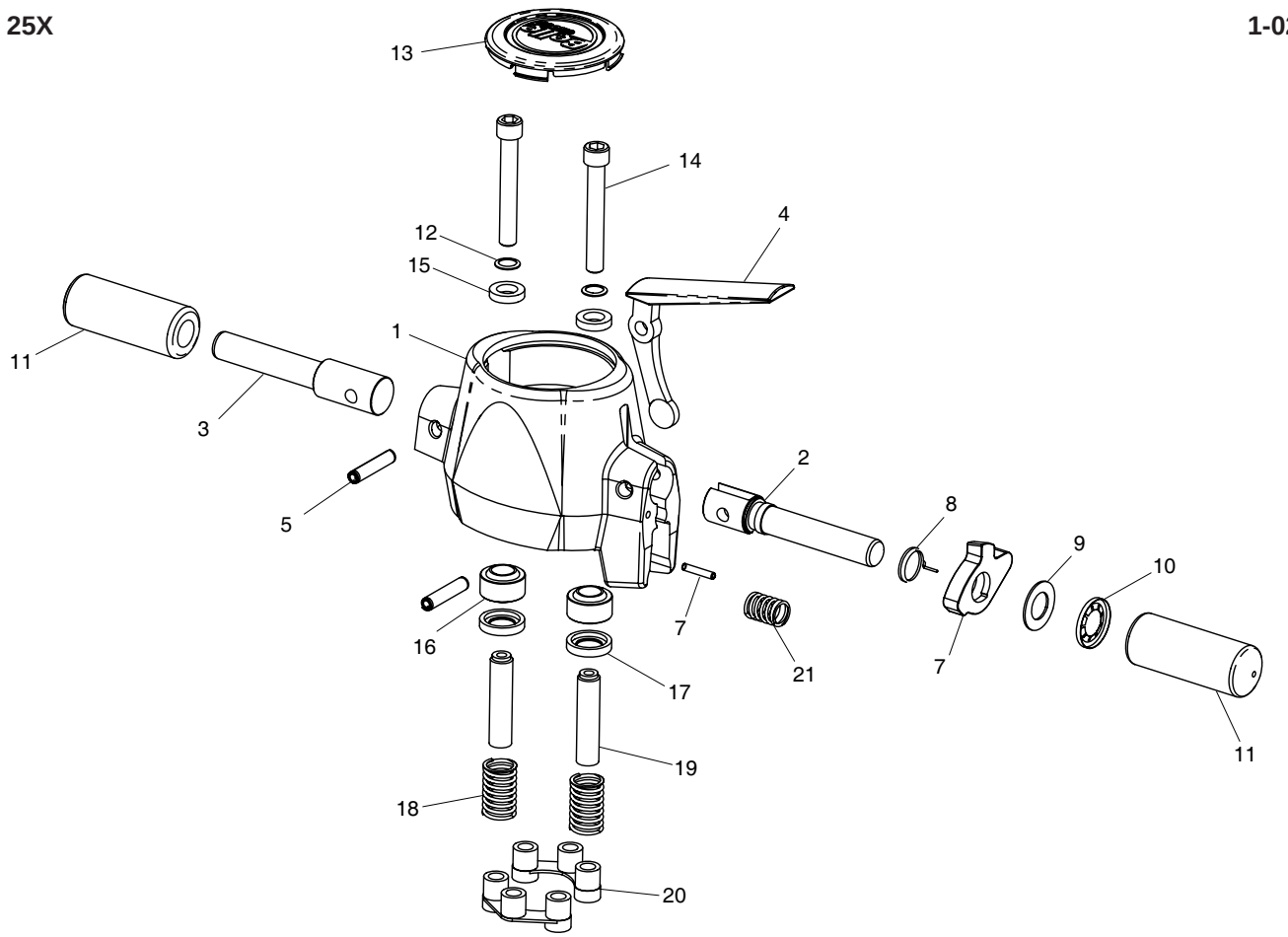
BHB 19, BHB 19 USA, BHB 23, BHB 25, BHB 27 & BHB 30 USA **1-01**



Top Cover Assembly, Boitier de commande complet ,
Montaje Tapa Superior, Montagem da Cobertura Superior **1-01**

1	971/00101	Head				1
2	01997	Handle	Guidon	Manillar	Pega	1
3	01998	Handle	Guidon	Manillar	Pega	1
4	02203-00	Trigger	Déclenchement	Disparador	Gatilho	1
5	3/0074	Spirol Pin	Goupille Spirol	Pasador ´Spirol´	Pino em Espiral	10 x 45 2
6	2/0062	Spring	Ressort	Resorte	Mola	1
7	01873	Spring	Ressort	Resorte	Mola	1
8	01931	Washer	Rondelle	Arandela	Anilha	1
9	10-404-2000	Washer	Rondelle	Arandela	Anilha	1
10	01999	Hand Grip	Poignée	Asas	Punho	2
11	9/12034	Screw	Vis	Tornillo	Parafuso	M12 x 70 2
12	10-406-1200	Washer	Rondelle	Arandela	Anilha	M12 2
13	971/99101	Lever	Levier	Palanca	Alavanca	1
14	3/0075	Spirol Pin	Goupille Spirol	Pasador ´Spirol´	Pino em Espiral	5 x 26 1
15	971/10800	Trigger Kit				1

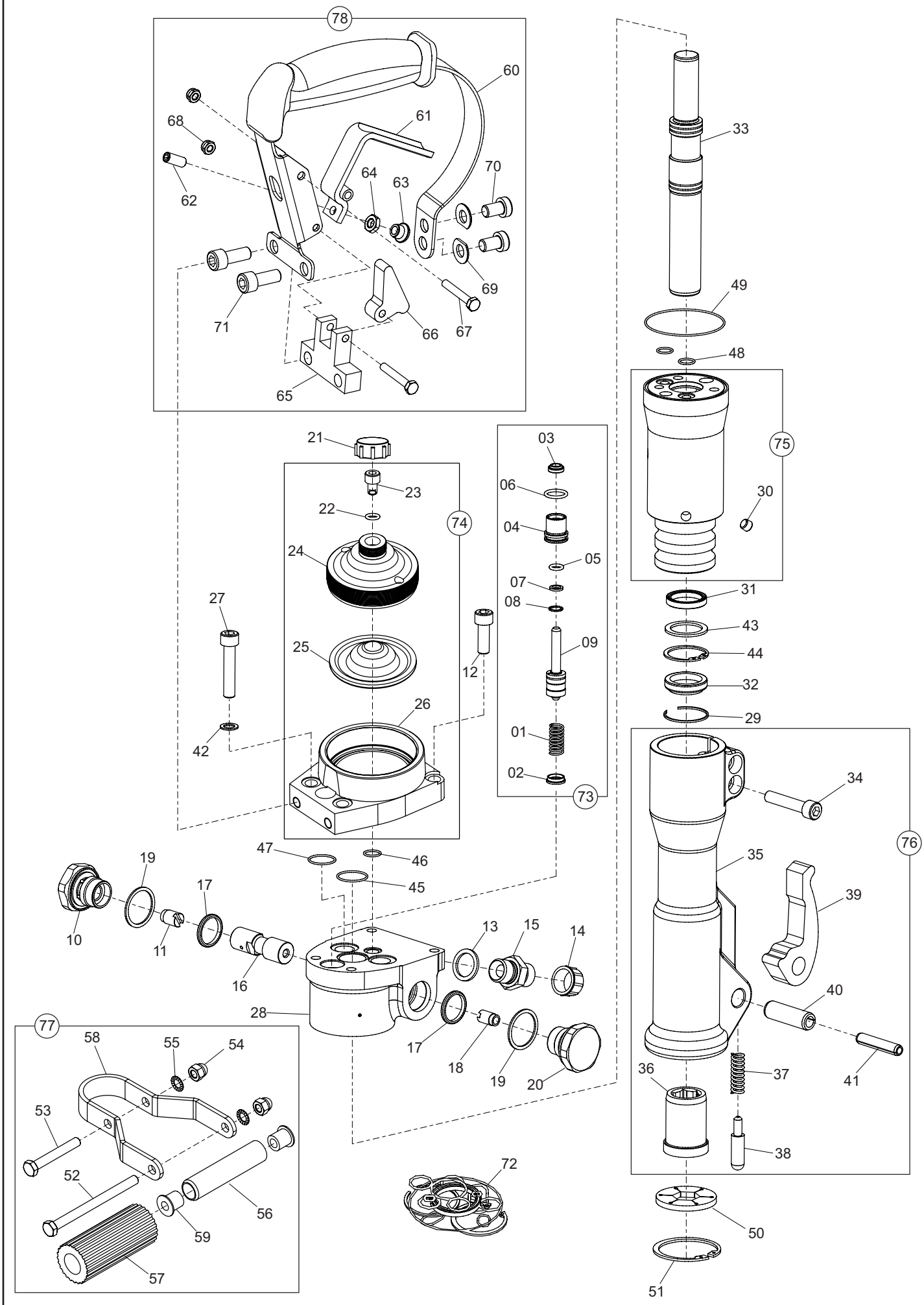
BHB 25X **1-02**



Top Cover Assembly, Boitier de commande complet , Montaje Tapa Superior, Montagem da Cobertura Superior

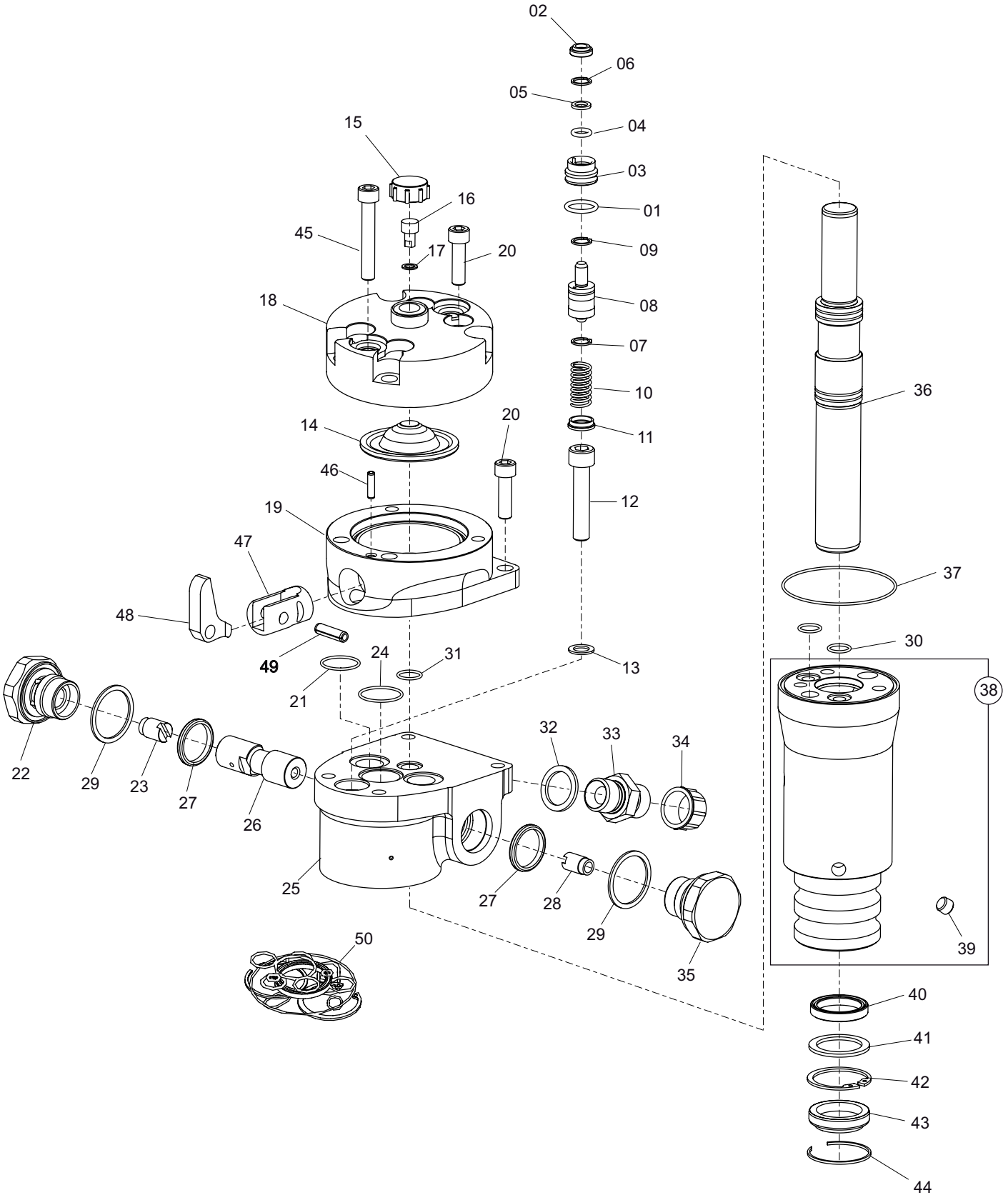
1-02

1	01949-00	UD Head Machined				1
2	01997	Handle	Guidon	Manillar	Pega	1
3	01998	Handle	Guidon	Manillar	Pega	1
4	02203-00	Trigger	Déclenchement	Disparador	Gatilho	1
5	3/0074	Spirol Pin	Goupille Spirol	Pasador ´Spirol´	Pino em Espiral	10 x 45 2
6	3/0075	Spirol Pin	Goupille Spirol	Pasador ´Spirol´	Pino em Espiral	5 x 26 1
7	971/99101	Lever	Levier	Palanca	Alavanca	1
8	01873	Spring	Ressort	Resorte	Mola	1
9	01931	Washer	Rondelle	Arandela	Anilha	1
10	10-404-2000	Washer	Rondelle	Arandela	Anilha	1
11	01999	Hand Grip	Poignée	Asas	Punho	2
12	10-406-1200	Washer	Rondelle	Arandela	Anilha	M12 2
13	971/99102	Cap	Capuchon	Casquete	Tampa	1
14	10-330-1285	Screw	Vis	Tornillo	Parafuso	M12 x 85 2
15	02307	Ring	Bague	Anillo	Anel	2
16	01957	Bearing	Roulement	Cojinete	Rolamento	2
17	01994	Cap	Capuchon	Casquete	Tampa	2
18	M 486910S	Spring	Ressort	Resorte	Mola	2
19	02306	Tube	Tube	Tubo	Tubo	2
20	02012	Buffer	Butoir	Parachoques	Amortecedor	2
21	2/0062	Spring	Ressort	Resorte	Mola	1
22	971/10800	Trigger Kit				1


78
60
61
68
62
64
63
70
69
71
66
67
65
33
49
48
75
30
31
43
44
32
29
21
23
22
74
24
25
26
27
42
12
03
06
04
05
07
08
09
01
02
73
47
46
45
19
17
10
11
16
13
15
14
28
18
20
76
34
35
39
40
41
36
37
38
77
58
55
54
53
52
56
59
57
72
50
51

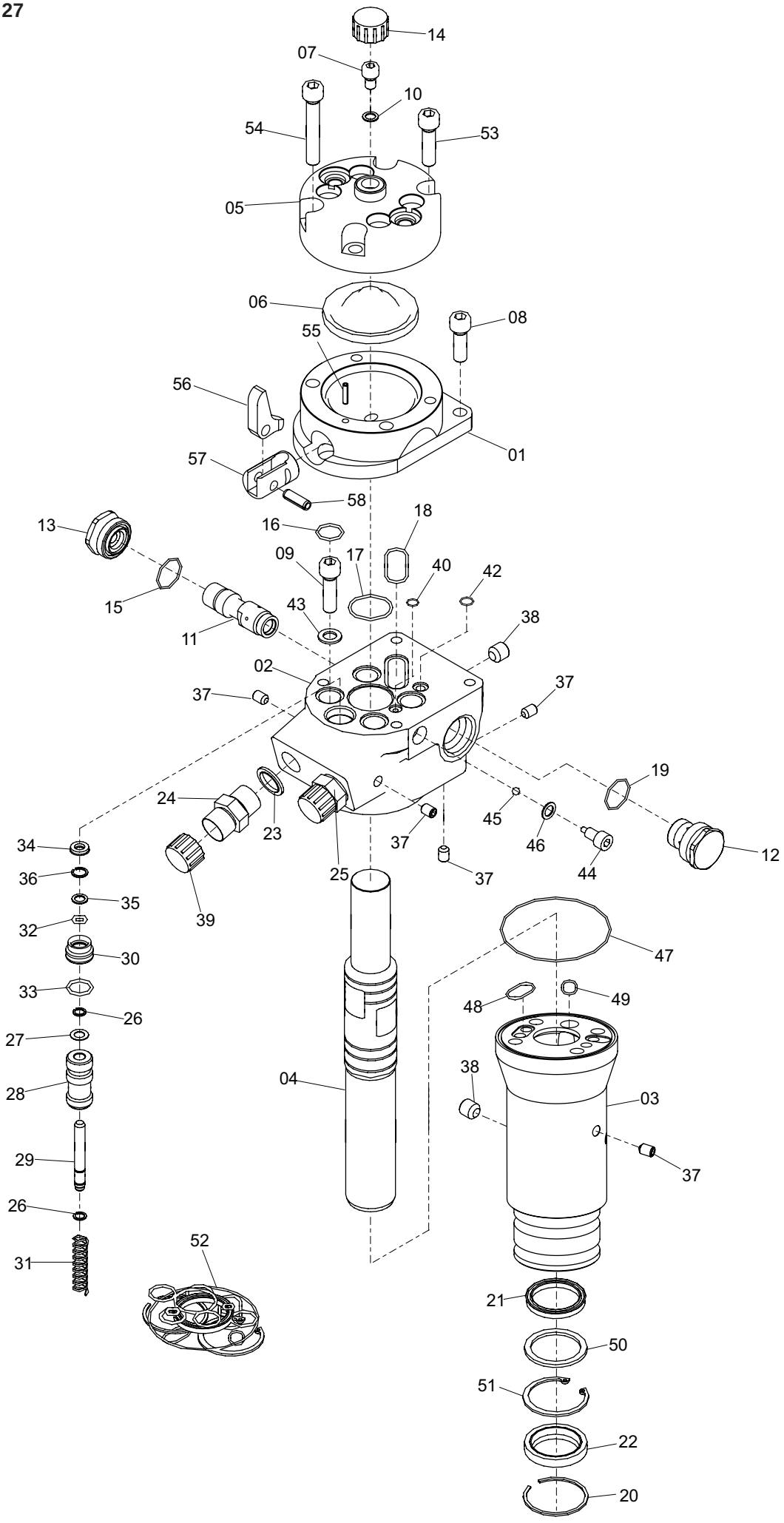
Main Assembly, 2-01

1	971/00801	Spring	Ressort	Resorte	Mola		1
2	971/00802	Washer	Rondelle	Arandela	Anilha		1
3	971/00803	Seal	Joint d'étanchéité	Obturador	Vedante	ø8/14 x 3.5/5	1
4	971/00804	Gland	Presse-étoupe	Prensaestopas	Bucha		1
5	971/00805	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø8.3 x 2.4	1
6	971/00806	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø16.3 x 2.4	1
7	971/00807	Ring	Bague	Anillo	Anel		1
8	971/00808	Circlip	Circlip	Resorte circular	Grampo circular		1
9	971/00809	Spool	Tiroir	Carrete	Carretel		1
10	971/99001	Socket	Prise	Enchufe	Tomada	T	1
11	971/99002	Spool	Tiroir	Carrete	Carretel	T	1
12	7/1004	Screw	Vis	Tornillo	Parafuso	M10 x 35	4
13	971/99004	Seal	Joint d'étanchéité	Obturador	Vedante	½" BSP	2
14	971/99005	Cap	Capuchon	Casquete	Tampa	½" BSP	2
15	971/99006	Nipple	Téton femelle	Tetón	Bocal	½ BSP (T)	2
16	971/99007	Spool	Tiroir	Carrete	Carretel		1
17	971/99008	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø24,2 x 3	2
18	971/99009	Spool	Tiroir	Carrete	Carretel	P	1
19	971/99010	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø33 x 2	2
20	971/99011	Socket	Prise	Enchufe	Tomada	P	1
21	971/00201	Nut	Ecrou	Tuerca	Porca	M24 x 1.5	1
22	971/00202	Seal	Joint d'étanchéité	Obturador	Vedante	ø8,7/13 x 1	1
23	971/00203	Screw	Vis	Tornillo	Parafuso		1
24	971/00204	Cover	Capot	Cubierta	Tampa		1
25	971/00205	Diaphragm	Diaphragme	Diafragma	Diafragma		1
26	971/00206	Body	Carène	Cuerpo	Corpo		1
27	971/99012	Screw	Vis	Tornillo	Parafuso	M10 x 50	3
28	971/99013	Body	Carène	Cuerpo	Corpo		1
29	971/99014	Ring	Bague	Anillo	Anel		1
30	971/00301	Fitting	Fixation	Accesorio	Encaixe		4
31	971/99015	Seal	Joint d'étanchéité	Obturador	Vedante	ø28/36 x 5.7	1
32	971/99016	Seal	Joint d'étanchéité	Obturador	Vedante	ø28/38 x 7/10	1
33	971/99017	Piston	Piston	Pistón	Pistão		1
34	7/10017	Screw	Vis	Tornillo	Parafuso	M10 x 50	2
35	971/00401	Nose Piece	Extrémité	Ojiva	Encabadouro	HEX 22	1
36	971/00402	Bush	Douille	Buje	Bucha	HEX 22	1
37	971/00403	Spring	Ressort	Resorte	Mola		1
38	971/00404	Pin	Goupille	Pivote	Pino		1
39	971/00405	Latch	Verrou	Cerrojo	Trinco		1
40	971/00406	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø16 x 50	1
41	971/00407	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø10 x 50	1
42	971/99018	Washer	Rondelle	Arandela	Anilha		3
43	971/99019	Washer	Rondelle	Arandela	Anilha	ø28.7/38 x 2	1
44	971/99020	Circlip	Circlip	Resorte circular	Grampo circular		1
45	971/99021	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø25 x 1.5	1
46	971/99022	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø13 x 1.5	1
47	971/99023	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø22 x 1.5	2
48	971/99024	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø12 x 1.5	2
49	971/99025	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø69 x 1.5	1
50	971/99026	Bellows	Soufflet	Fuelles	Fole		1
51	971/99027	Circlip	Circlip	Resorte circular	Grampo circular	ø57 x 2	1
52	971/00501	Screw	Vis	Tornillo	Parafuso	M10 x 130	1
53	971/00502	Screw	Vis	Tornillo	Parafuso	M10 x 70	1
54	8/10006	Nut	Ecrou	Tuerca	Porca		2
55	4/1004	Washer	Rondelle	Arandela	Anilha	ø10	2
56	971/00505	Tube	Tube	Tubo	Tubo		1
57	971/00506	Handle	Guidon	Manillar	Pega		1
58	971/00507	Bracket	Patte de support	Escuadra	Suporte		1
59	971/00508	Bush	Douille	Buje	Bucha		2
60	971/00601	Handle	Guidon	Manillar	Pega		1
61	971/00602	Trigger	Déclenchement	Disparador	Gatilho		1
62	7/8001	Screw	Vis	Tornillo	Parafuso	M8 x 30	1
63	971/00604	Pad	Tampon	Tampón	Bloco		1
64	971/00605	Nut	Ecrou	Tuerca	Porca	M8	1
65	971/00606	Backstop					1
66	971/00607	Latch	Verrou	Cerrojo	Trinco		1
67	971/00608	Screw	Vis	Tornillo	Parafuso	M6 x 40	2
68	8/6007	Nut	Ecrou	Tuerca	Porca	M6	2
69	971/00610	Washer	Rondelle	Arandela	Anilha	ø10	2
70	971/00611	Screw	Vis	Tornillo	Parafuso	M10 x 16	2
71	971/00612	Screw	Vis	Tornillo	Parafuso	M10 x 25	2
72	971/00700	Seal Kit	Jeu étanchéité	Juego retenes	Conjunto de Vedante		1
73	971/00800	Trigger Assembly	Ensemble Déclenchement	Conjunto de Disparador	Conjunto de Gatilho		1
74	971/00200	Accumulator Assembly					1
75	971/00300	Cylinder	Vérin	Cilindro	Cilindro		1
76	971/00400	Nose Assembly	Corps de marteau complet	Montaje Cuerpo Intermedio	Conjunto do Encabadouro		1
77	971/00500	Handle Assembly	Ensemble Guidon	Conjunto de Manillar	Conjunto do Pega		1
78	971/00600	Handle Assembly	Ensemble Guidon	Conjunto de Manillar	Conjunto do Pega		1


02
06
05
04
03
01
09
08
07
10
11
12
13
15
16
45
17
20
18
14
20
46
19
47
48
49
24
31
21
22
29
23
27
26
25
32
33
34
27
28
29
35
50
36
37
30
38
39
40
41
42
43
44

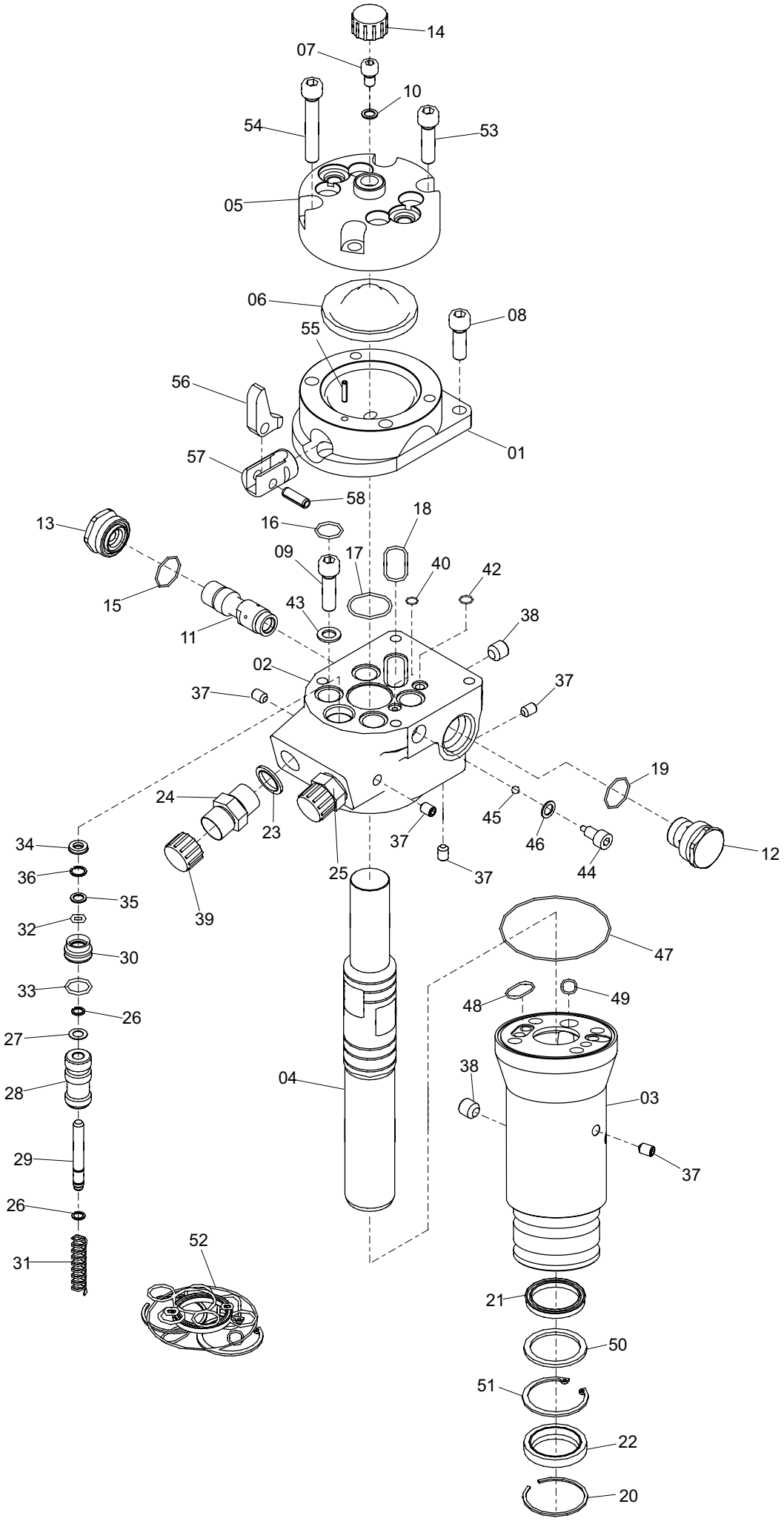
Main Assembly, 2-02

1	971/00806	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø16.3x2.4	1
2	971/00803	Seal	Joint d'étanchéité	Obturador	Vedante	ø8/14x3.5/5	1
3	971/99028	Gland	Presse-étoupe	Prensaestopas	Bucha		1
4	971/00805	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø8.3x2.4	1
5	971/00807	Ring	Bague	Anillo	Anel		1
6	971/00808	Circlip	Circlip	Resorte circular	Grampo circular		1
7	971/99029	Circlip	Circlip	Resorte circular	Grampo circular		2
8	971/99030	Spool	Tiroir	Carrete	Carretel		1
9	971/99031	Rod	Tige	Varilla	Biela		1
10	971/00801	Spring	Ressort	Resorte	Mola		1
11	971/00802	Washer	Rondelle	Arandela	Anilha		1
12	7/10017	Screw	Vis	Tornillo	Parafuso	M10x50	3
13	971/99018	Washer	Rondelle	Arandela	Anilha		3
14	971/00205	Diaphragm	Diaphragme	Diafragma	Diafragma		1
15	971/99033	Cap	Capuchon	Casquete	Tampa	M24x1.5	1
16	971/00203	Screw	Vis	Tornillo	Parafuso		1
17	971/00202	Seal	Joint d'étanchéité	Obturador	Vedante	ø8,7/13x1	1
18	971/99034	Cover	Capot	Cubierta	Tampa		1
19	971/99035	Body	Carène	Cuerpo	Corpo		1
20	7/0006	Screw	Vis	Tornillo	Parafuso	M10x30	4
21	971/99023	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø22x1.5	2
22	971/99001	Socket	Prise	Enchufe	Tomada	T	1
23	971/99002	Spool	Tiroir	Carrete	Carretel		1
24	971/99021	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø25x1.5	1
25	971/99037	Body	Carène	Cuerpo	Corpo		1
26	971/99038	Spool	Tiroir	Carrete	Carretel	1-Flat	1
26	971/99007	Spool	Tiroir	Carrete	Carretel	2-Flat	1
27	971/99008	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø24,2x3	2
28	971/99009	Spool	Tiroir	Carrete	Carretel	P	1
29	971/99010	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø33x2	2
30	971/99024	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø12x1.5	2
31	971/99022	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø13x1.5	1
32	971/99004	Seal	Joint d'étanchéité	Obturador	Vedante		2
33	971/99006	Nipple	Téton femelle	Tetón	Bocal	½ BSP (T)	2
33	971/99039	Nipple	Téton femelle	Tetón	Bocal	½ JIC (T)	2
34	971/99005	Cap	Capuchon	Casquete	Tampa	½" BSP	2
34	971/99040	Cap	Capuchon	Casquete	Tampa	½" JIC	2
35	971/99011	Socket	Prise	Enchufe	Tomada	P	1
36	971/99017	Piston	Piston	Pistón	Pistão		1
37	971/99025	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø69x1.5	1
38	971/00900	Cylinder	Vérin	Cilindro	Cilindro		1
39	971/00301	Fitting	Fixation	Accesorio	Encaixe		4
40	971/99015	Seal	Joint d'étanchéité	Obturador	Vedante	ø28/36x5.7	1
41	971/99019	Washer	Rondelle	Arandela	Anilha	ø28.7/38x2	1
42	971/99020	Circlip	Circlip	Resorte circular	Grampo circular		1
43	971/99016	Afdichtring	Dichtung	Tætning	Tenuta	ø28/38x7/10	1
44	971/99014	Ring	Bague	Anillo	Anel		1
45	9/10014	Screw	Vis	Tornillo	Parafuso	M10x70	2
46	971/99042	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø5x30	1
47	971/99043	Support	Support	Soporte	Suporte		1
48	971/99044	Lever	Levier	Palanca	Alavanca		1
49	971/99045	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø8x20	1
50	971/01000	Seal Kit	Jeu étanchéité	Juego retenes	Conjunto de Vedante		10


14
07
10
54
53
05
06
08
55
56
01
57
58
13
16
18
09
17
40
42
15
43
38
11
02
37
37
19
24
23
45
46
12
37
44
34
25
37
36
39
35
32
30
47
33
26
48
49
27
04
38
28
03
29
37
26
52
31
21
50
51
22
20

Main Assembly, 2-03

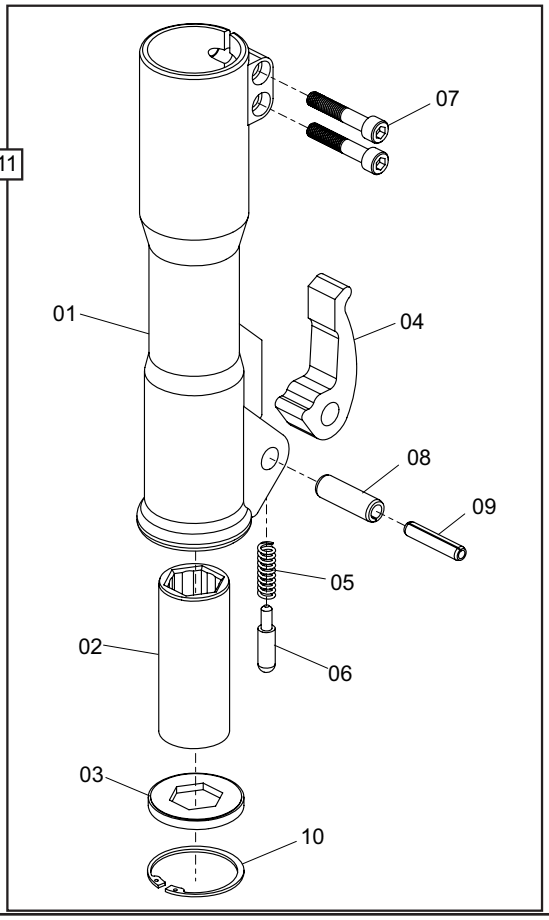
1	971/99046	Body	Carène	Cuerpo	Corpo		1
2	971/01100	Body	Carène	Cuerpo	Corpo		1
3	971/01200	Cylinder	Vérin	Cilindro	Cilindro		1
4	971/99047	Piston	Piston	Pistón	Pistão		1
5	971/99049	Cover	Capot	Cubierta	Tampa		1
6	971/00205	Diaphragm	Diaphragme	Diafragma	Diafragma		1
7	971/00203	Screw	Vis	Tornillo	Parafuso		1
8	971/00612	Screw	Vis	Tornillo	Parafuso	M10x25	2
9	7/1004	Screw	Vis	Tornillo	Parafuso	M10x35	4
10	971/00202	Seal	Joint d'étanchéité	Obturador	Vedante	ø8,7/13x1	1
11	971/99050	Spool	Tiroir	Carrete	Carretel		1
12	971/99051	Socket	Prise	Enchufe	Tomada		1
13	971/99052	Socket	Prise	Enchufe	Tomada		1
14	971/99033	Cap	Capuchon	Casquete	Tampa	M24x1.5	1
15	971/99053	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø24x1.5	1
16	971/99054	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø18x2	4
17	971/99055	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø30x2	1
18	971/99056	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø32x2	1
19	971/99057	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø25.12x1.78	1
20	971/99058	Ring	Bague	Anillo	Anel		1
21	971/99059	Seal	Joint d'étanchéité	Obturador	Vedante	ø32/40x6	1
22	971/99060	Seal	Joint d'étanchéité	Obturador	Vedante	ø32/45x7/10	1
23	971/99004	Seal	Joint d'étanchéité	Obturador	Vedante	½" BSP	2
24	971/99006	Nipple	Téton femelle	Tetón	Bocal	½ BSP w/o restriction	1
24	971/99061	Nipple	Téton femelle	Tetón	Bocal	½ BSP 3.4mm restrictor	1
24	971/99062	Nipple	Téton femelle	Tetón	Bocal	½ BSP 3.8mm restrictor	1
25	971/99006	Nipple	Téton femelle	Tetón	Bocal	½ BSP w/o restriction	1
26	971/99029	Circlip	Circlip	Resorte circular	Grampo circular		2
27	971/99064	Shim	Cale	Cuña	Calço	8x14x0.5	1
28	971/99065	Spool	Tiroir	Carrete	Carretel		1
29	971/99066	Rod	Tige	Varilla	Biela		1
30	971/99028	Gland	Presse-étoupe	Prensaestopas	Bucha		1
31	971/99067	Spring	Ressort	Resorte	Mola		1
32	971/00805	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø8.3x2.4	1
33	971/00806	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø16.3x2.4	1
34	971/00803	Seal	Joint d'étanchéité	Obturador	Vedante	ø8/14x3.5/5	1
35	971/00807	Ring	Bague	Anillo	Anel		1
36	971/00808	Circlip	Circlip	Resorte circular	Grampo circular		1
37	971/00301	Fitting	Fixation	Accesorio	Encaixe		6
38	971/99068	Fitting	Fixation	Accesorio	Encaixe		3
39	971/99005	Cap	Capuchon	Casquete	Tampa	½" BSP	2
40	971/99069	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø6x2	1
41	9/10014	Screw	Vis	Tornillo	Parafuso	M10x70	2
42	971/99070	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø8x2	1
43	971/99018	Washer	Rondelle	Arandela	Anilha		4
44	971/99071	Washer	Rondelle	Arandela	Anilha		1
45	971/99072	Ball Bearing	Roulement à billes	Cojinete de Bolas	Rolamento de Esferas		1
46	971/99073	Seal	Joint d'étanchéité	Obturador	Vedante	ø9/14x1	1
47	971/99074	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø82x1.5	1
48	971/99075	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø16x1.5	1
49	971/99022	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø13x1.5	1
50	971/99076	Washer	Rondelle	Arandela	Anilha	ø32.7/45x2.5	1
51	971/99077	Ring	Bague	Anillo	Anel		1
52	971/01400	Seal Kit	Jeu étanchéité	Juego retenes	Conjunto de Vedante		1
53	7/0006	Screw	Vis	Tornillo	Parafuso	M10x30	2
54	9/10014	Screw	Vis	Tornillo	Parafuso	M10x70	2
55	971/99042	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø5x30	1
56	971/99044	Lever	Levier	Palanca	Alavanca		1
57	971/99079	Support	Support	Soporte	Suporte		1
58	971/99045	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø8x20	1


14
07
10
54
53
05
06
08
55
56
01
57
58
13
16
18
09
17
40
42
15
43
38
11
02
37
37
19
24
23
45
46
12
37
44
34
25
37
36
39
35
32
30
47
33
26
48
49
27
04
38
28
03
29
37
26
52
31
21
50
51
22
20

Main Assembly, 2-04

1	971/99046	Body	Carène	Cuerpo	Corpo		1
2	971/01100	Body	Carène	Cuerpo	Corpo		1
3	971/01300	Cylinder	Vérin	Cilindro	Cilindro		1
4	971/99048	Piston	Piston	Pistón	Pistão		1
5	971/99049	Cover	Capot	Cubierta	Tampa		1
6	971/00205	Diaphragm	Diaphragme	Diafragma	Diafragma		1
7	971/00203	Screw	Vis	Tornillo	Parafuso		1
8	971/00612	Screw	Vis	Tornillo	Parafuso	M10x25	2
9	7/1004	Screw	Vis	Tornillo	Parafuso	M10x35	4
10	971/00202	Seal	Joint d'étanchéité	Obturador	Vedante	ø8,7/13x1	1
11	971/99050	Spool	Tiroir	Carrete	Carretel		1
12	971/99051	Socket	Prise	Enchufe	Tomada		1
13	971/99052	Socket	Prise	Enchufe	Tomada		1
14	971/99033	Cap	Capuchon	Casquete	Tampa	M24x1.5	1
15	971/99053	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø24x1.5	1
16	971/99054	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø18x2	4
17	971/99055	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø30x2	1
18	971/99056	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø32x2	1
19	971/99057	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø25.12x1.78	1
20	971/99058	Ring	Bague	Anillo	Anel		1
21	971/99059	Seal	Joint d'étanchéité	Obturador	Vedante	ø32/40x6	1
22	971/99060	Seal	Joint d'étanchéité	Obturador	Vedante	ø32/45x7/10	1
23	971/99004	Seal	Joint d'étanchéité	Obturador	Vedante	½" BSP	2
24	971/99039	Nipple	Téton femelle	Tetón	Bocal	½ JIC w/o restriction	1
24	971/99063	Nipple	Téton femelle	Tetón	Bocal	½ JIC 3.8mm restrictor	1
25	971/99039	Nipple	Téton femelle	Tetón	Bocal	½ JIC w/o restriction	1
26	971/99029	Circlip	Circlip	Resorte circular	Grampo circular		2
27	971/99064	Shim	Cale	Cuña	Calço	8x14x0.5	1
28	971/99065	Spool	Tiroir	Carrete	Carretel		1
29	971/99066	Rod	Tige	Varilla	Biela		1
30	971/99028	Gland	Presse-étoupe	Prensaestopas	Bucha		1
31	971/99067	Spring	Ressort	Resorte	Mola		1
32	971/00805	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø8.3x2.4	1
33	971/00806	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø16.3x2.4	1
34	971/00803	Seal	Joint d'étanchéité	Obturador	Vedante	ø8/14x3.5/5	1
35	971/00807	Ring	Bague	Anillo	Anel		1
36	971/00808	Circlip	Circlip	Resorte circular	Grampo circular		1
37	971/00301	Fitting	Fixation	Accesorio	Encaixe		6
38	971/99068	Fitting	Fixation	Accesorio	Encaixe		3
39	971/99040	Cap	Capuchon	Casquete	Tampa	½" JIC	2
40	971/99069	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø6x2	1
41	9/10014	Screw	Vis	Tornillo	Parafuso	M10x70	2
42	971/99070	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø8x2	1
43	971/99018	Washer	Rondelle	Arandela	Anilha		4
44	971/99071	Washer	Rondelle	Arandela	Anilha		1
45	971/99072	Ball Bearing	Roulement à billes	Cojinete de Bolas	Rolamento de Esferas		1
46	971/99073	Seal	Joint d'étanchéité	Obturador	Vedante	ø9/14x1	1
47	971/99074	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø82x1.5	1
48	971/99075	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø16x1.5	1
49	971/99022	O-Ring	Joint torique	Junta tórica	Anel Vedante	ø13x1.5	1
50	971/99076	Washer	Rondelle	Arandela	Anilha	ø32.7/45x2.5	1
51	971/99077	Ring	Bague	Anillo	Anel		1
52	971/01400	Seal Kit	Jeu étanchéité	Juego retenes	Conjunto de Vedante		1
53	7/10006	Screw	Vis	Tornillo	Parafuso	M10x30	2
54	9/10014	Screw	Vis	Tornillo	Parafuso	M10x70	2
55	971/99042	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø5x30	1
56	971/99044	Lever	Levier	Palanca	Alavanca		1
57	971/99079	Support	Support	Soporte	Suporte		1
58	971/99045	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø8x20	1

BHB 19, BHB 19 USA, BHB 23, BHB 25X, BHB 25, BHB 27 & BHB 30 USA 3-01



Nose Assembly, Corps de marteau complet, Montaje Cuerpo Intermedio, Conjunto do Encabadouro 3-01

BHB 19, BHB 23

1	971/01502	Nose Piece	Extrémité	Ojiva	Encabadouro	Hex 25	1
2	971/01503	Bush	Douille	Buje	Bucha	Hex 25 x 108	1
3	971/01504	Bellows	Soufflet	Fuelles	Fole	Hex 25	1
4	971/01505	Latch	Verrou	Cerrojo	Trinco		1
5	971/00403	Spring	Ressort	Resorte	Mola		1
6	971/00404	Pin	Goupille	Pivote	Pino		1
7	7/10037	Screw	Vis	Tornillo	Parafuso	M10 x 55	2
8	971/00406	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø16x50	1
9	971/00407	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø10x50	1
10	971/99027	Ring	Bague	Anillo	Anel	ø64x2	1
11	971/01500	Nose Assembly	Corps de Marteau Complet	Montaje Cuerpo Intermdeio	Conjunto do Encabadouro	Hex 25 x 108	1

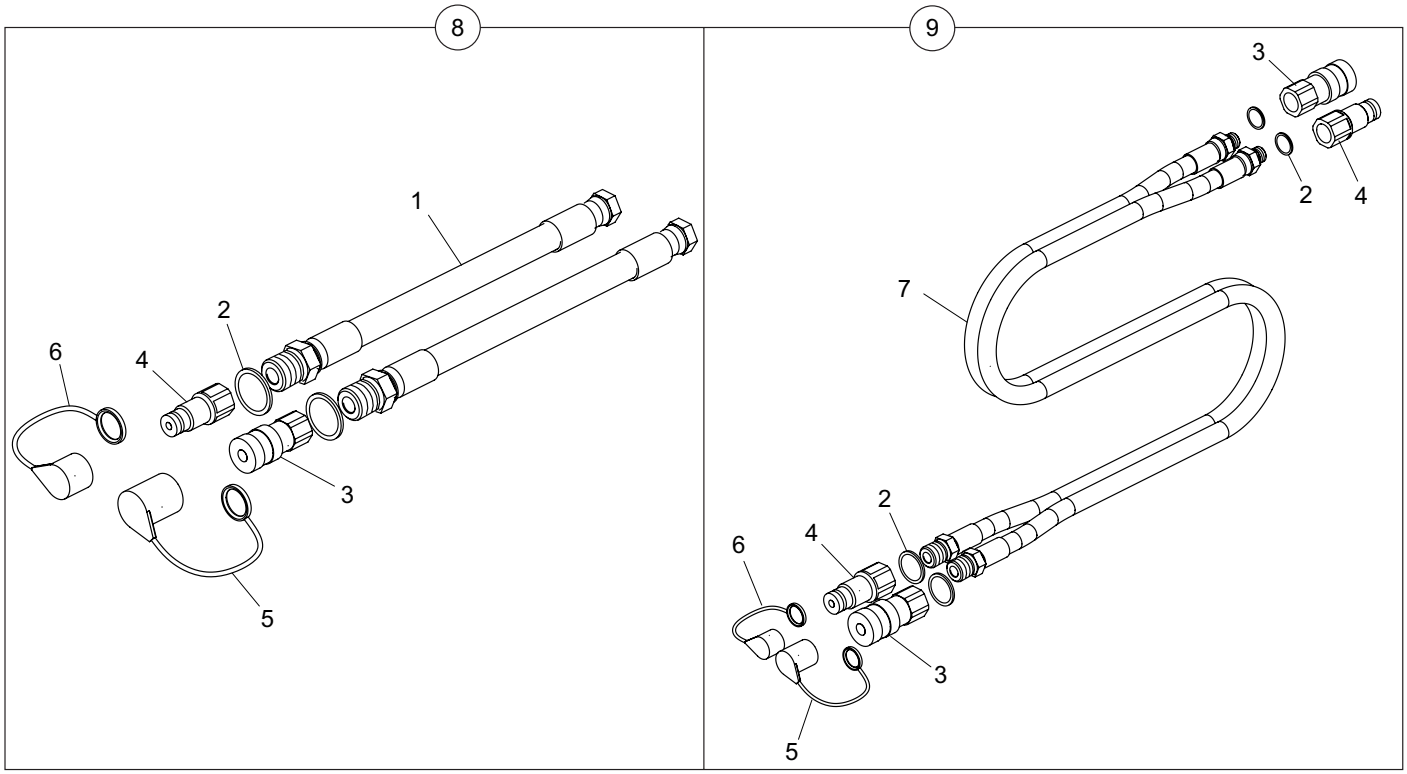
BHB 25X, BHB 25, BHB 27

1	971/01601	Nose Piece	Extrémité	Ojiva	Encabadouro	Hex 28/32	1
2	971/01602	Bush	Douille	Buje	Bucha	Hex 32 x 160	1
3	971/01603	Bellows	Soufflet	Fuelles	Fole	Hex 32	1
4	971/01505	Latch	Verrou	Cerrojo	Trinco		1
5	971/00403	Spring	Ressort	Resorte	Mola		1
6	971/00404	Pin	Goupille	Pivote	Pino		1
7	7/10037	Screw	Vis	Tornillo	Parafuso	M10 x 55	2
8	971/00406	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø16x50	1
9	971/00407	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø10x50	1
10	971/01606	Ring	Bague	Anillo	Anel	ø64x2	1
11	971/01600	Nose Assembly	Corps de Marteau Complet	Montaje Cuerpo Intermdeio	Conjunto do Encabadouro	Hex 32 x 160	1

BHB 19 USA, BHB 30 USA

1	971/01601	Nose Piece	Extrémité	Ojiva	Encabadouro		1
2	971/01702	Bush	Douille	Buje	Bucha		1
3	971/01603	Bellows	Soufflet	Fuelles	Fole		1
4	971/01505	Latch	Verrou	Cerrojo	Trinco		1
5	971/00403	Spring	Ressort	Resorte	Mola		1
6	971/00404	Pin	Goupille	Pivote	Pino		1
7	7/10037	Screw	Vis	Tornillo	Parafuso		2
8	971/00406	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø16x50	1
9	971/00407	Roll Pin	Goupille fendue	Pivote de rodillo	Pino cilíndrico	ø10x50	1
10	971/01606	Ring	Bague	Anillo	Anel	ø64x2	1
11	971/01700	Nose Assembly	Corps de Marteau Complet	Montaje Cuerpo Intermdeio	Conjunto do Encabadouro	Hex 32 x 152	1

BHB 12, BHB 19, BHB 19 USA, BHB 23, BHB 25X, BHB 25, BHB 27 & BHB 30 USA 4-01



Hose Assembly, Assemblage de la Durite, Con. de Manguera, Montagem de Mangueira 4-01

							0.4m	7.0m
1	971/01801	Hose	Durit	Flexible	Mangueira	1/2" BSP	2	-
1	971/01901	Hose	Durit	Flexible	Mangueira	1/2" JIC	2	-
2	971/99004	Seal	Joint d'étanchéité	Obturador	Vedante	1/2" BSP	2	4
3	971/01802	Coupling	Accouplement	Acoplamiento	Acoplamento	Female 1/2" BSP	1	2
3	971/01902	Coupling	Accouplement	Acoplamiento	Acoplamento	Female 3/4 UNF	1	2
4	971/01803	Coupling	Accouplement	Acoplamiento	Acoplamento	Male 1/2" BSP	1	2
4	971/01903	Coupling	Accouplement	Acoplamiento	Acoplamento	Male 3/4 UNF	1	2
5	971/01804	Cap	Capuchon	Casquete	Tampa	Female	1	2
6	971/01805	Cap	Capuchon	Casquete	Tampa	Male	1	2
7	971/99081	Hose	Durit	Flexible	Mangueira	1/2"	-	1
8	971/01800	Hose Kit	Ensemble Durit	Conjunto de Flexible	Conjunto de Mangueiras	0.4m BSP	1	-
8	971/01900	Hose Kit	Ensemble Durit	Conjunto de Flexible	Conjunto de Mangueiras	0.4m JIC	1	-
9	971/02000	Hose Kit	Ensemble Durit	Conjunto de Flexible	Conjunto de Mangueiras	7.0m	-	1

No.1 for Light Construction Equipment

www.BelleGroup.com

Belle Group Head Office
Sheen, nr. Buxton
Derbyshire. SK17 OEU GB.
Tel: +44 (0)1298 84000
Fax: +44 (0)1298 84722
email: sales@belle-group.co.uk

Belle Group France
70, av du Général de Gaulle
94022 Creteil, Cedex.
FRANCE
Tel: +33 (0) 1 49 81 68 32
Fax: +33 (0) 1 43 39 94 40
Ventes : 0800 902 461
SAV : 0800 905 336
SAV Fax : 0800 909 895

Belle Equipos SL
Calle Doctor Calero Cial 19,
Local 22, 28220 Majadahonda
Madrid, Spain
Tel: +34 (0) 91 636 2043
Fax: +34 (0) 91 634 1535
email:belleequipos@belleequipos.com

Belle Group Deutschland
Husumer Straße 45 a,
D-33729,
Bielefield
Deutschland
Tel : +49(0) 5217 707505
Fax : +49 (0) 5217 707506
Sales: 0800 1808069
Spares: 0800 1816673

Belle Poland sp. z.o.o.
96-200 Rawa Mazowiecka
Ul. Mszczonowska 36,
Polska
Tel: +48 (0) 46 8144091
Fax: +48 (0) 46 8144700

Belle Group Portugal
Rua Laura Alves, 225, 2° F
2775-116 Parede
Portugal
Tel: +35 1 (21) 453 59 91
Fax: +35 1 (21) 453 59 91

Belle Group Netherlands
Tel: 0800 249861

Belle Group Belguim
Tel: 0800 80295

Belle Group Austria
Tel: 0800 291544

Belle Group Russia
64 Nevsky pr.
St, Petersburg
Russia
Tel : +7(812)314-81-34
Moscow : +7(495)589-64-32

Belle Group South East Asia
21, Jalan Ara AD 7/3B,
Pandar Sri Damansara
S2200 Kuala Lumpar, Malaysia
Tel: +60 (0) 3 62721678
+60 (0) 3 6272 9308
Fax: +60 (0) 3 6272 9528

Belle Group (GB), Shanghai Office
Room 213, Zhonghuang Building,
1007 Zhongshan Nan Er Road,
Xuhui, Shanghai 200030 China
Tel: 00 - 86 - 21 - 5461 5228
Mobile: 00 - 86 - 133 8172 2653
Fax: 00 - 86 - 21 - 5461 5369
email: morgan.liu@bellegroup.com.cn

Belle Group Inc
3959 Electric Rd
Roanoake
Suite 360
VA 24018. USA.
Tel: +1.540.345.5090
Fax: +1.540.345.5091
Toll free 866 540 5090
e-mail: sales@bellegroup.net

Belle GROUP Parts CENTRE

Belle Group World Parts Centre
Unit 5, Bode Business Park
Ball Haye Green,
Leek,
Staffordshire,
ST13 8BW
Tel: 44+ 1538 380000
Fax: 44+ 1538 380038